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## AMEOF700-HAMJZ



Open Frame

The AMEOF700-HAMJZ series is one of Aimtec's compact size 700W AC/DC converter, which is also suitable for medical equipment. It features a universal AC input of 90-264VAC and accepts a DC input voltage of 127-370VDC, with standard high efficiency, and double or reinforced isolation.

This series of converters is designed to meet IEC/EN62368, ES/EN60601, EN60335 and GB4943 standards.

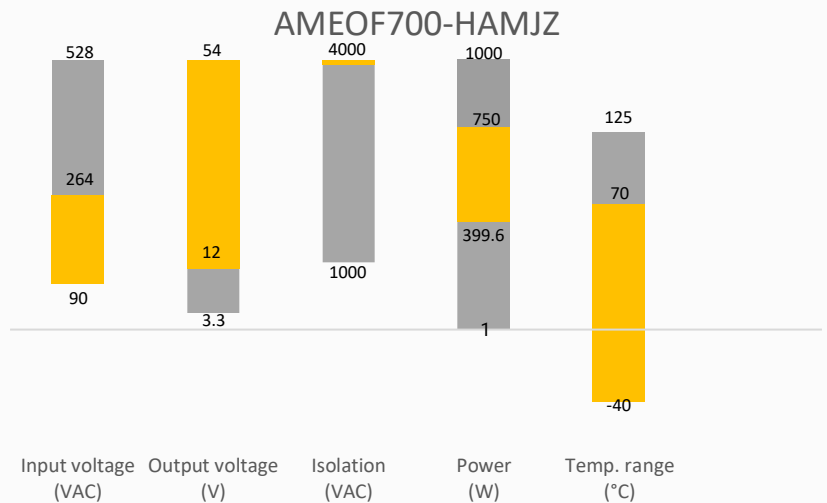
This series is suitable for industrial, security, telecommunications, smart home, and medical applications.

## Features

- Universal Input: 90-264VAC/127-370VDC
- Low leakage current: 0.5mA max.
- High isolation voltage: 4000VAC
- Active PFC
- Output short circuit, over-current, over-voltage, over temperature protection.
- Low no-load power consumption of 0.5W
- Suitable for Type BF application
- Designed to meet IEC/EN62368, ES/EN60601, EN60335 and GB4943 standards.
- 2xMOPP



## Summary



## Training



Product Training Video  
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Press Release

Coming Soon!

Application Notes

## Applications



Power Grid



Industrial



Telecom



Medical

## Models & Specifications

Model	Cooling Method	Input Voltage (VAC/Hz)	Nominal Output wattage (W)	Output Voltage (V)	Output Voltage Adjustable Range (V)	Output Current (A)	Maximum capacitive load (μF)	Efficiency @230VAC Typ. (%)
AMEOF700-12SHAMJZ	Air Cooling	Full Voltage Range	399.6	12	11.4 ~ 12.6	33.3	5000	92
	25 CFM		699.6	12		58.3		
AMEOF700-15SHAMJZ	Air Cooling	Full Voltage Range	400.5	15	14.25 ~ 15.75	26.7	5000	92
	25 CFM		700.5	15		46.7		
AMEOF700-24SHAMJZ	Air Cooling	115 VAC	400.8	24	22.8 ~ 25.2	16.7	3000	94
		230 VAC	451.2	24		18.8		
	25 CFM	Full Voltage Range	748.8	24		31.2		
AMEOF700-27SHAMJZ	Air Cooling	115 VAC	399.6	27	25.65 ~ 28.35	14.8	3000	94
		230 VAC	450.9	27		16.7		
	25 CFM	Full voltage range	750.6	27		27.8		
AMEOF700-36SHAMJZ	Air Cooling	115 VAC	399.6	36	34.2 ~ 37.8	11.1	2000	94.5
		230 VAC	450.0	36		12.5		
	25 CFM	Full voltage range	748.8	36		20.8		
AMEOF700-48SHAMJZ	Air Cooling	115 VAC	398.4	48	45.6 ~ 50.4	8.3	2000	95
		230 VAC	451.2	48		9.4		
	25 CFM	Full Voltage Range	748.8	48		15.6		
AMEOF700-54SHAMJZ	Air Cooling	115 VAC	399.6	54	51.3 ~ 56.7	7.4	1000	95
		230 VAC	449.8	54		8.33		
	25 CFM	Full Voltage Range	750.0	54		13.89		

\* The output current must not exceed the rated value when the output voltage is trimmed down.

\*\* Tested under forced air convection. Fan power consumption is not included.

### Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Input current	115VAC		8	A
	230VAC		4	A
Inrush current	115VAC (Cold Start)		50	A
	230VAC (Cold Start)		80	A
Leakage	264VAC	Contact Leakage Current	0.1	mA
		Earth Leakage Current	0.5	
Input Frequency		47-63		Hz
Power Factor	115 VAC (Full Load)		0.98	
	230 VAC (Full Load)		0.95	
ON/OFF control	On	≥2	5	V
	Off	≥0	0.6	V

### Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	12V/15V/24V/27V, 0-100% load	±2		%

	36V/48V/54V, 0-100% load	±1		%
Line regulation	Rated Load	±0.5		%
Load regulation	0%-100% Load	±1		%
Ripple & Noise*	20 MHz band width		200	mV p-p
Hold up time	115/230VAC	≥10		ms
Power good signal**	High	≥2	5	V
	Low	≥0	0.6	V
Standby output	Output voltage	5		V
	Output current, free air convection		1	A
	Output current, 25 CFM		2	A
	Voltage accuracy	±2		%
	Ripple and noise		120	mV p-p

\* Ripple and Noise are measured at 20MHz bandwidth with a 47μF electrolytic capacitor and a 0.1μF ceramic capacitor. Please refer to the application note for specific details.

\*\* TTL high signal will delay 10-500ms after power on the converter. TTL low signal will be sent at least 1ms before the output voltage drops to 90% of the rated output.

### Isolation Specification

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	60 sec, leakage ≤ 10mA	≥4000		VAC
Tested Input to GND	60 sec, leakage ≤ 10mA	≥2000		VAC
Tested Output to GND	60 sec, leakage ≤ 10mA	≥1500		VAC
Resistance I/O, I/PE, O/PE *	500VDC	>100		MΩ
MOP I/O			2xMOPP	
MOP I/PE			1xMOPP	
MOP O/PE			1xMOPP	

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

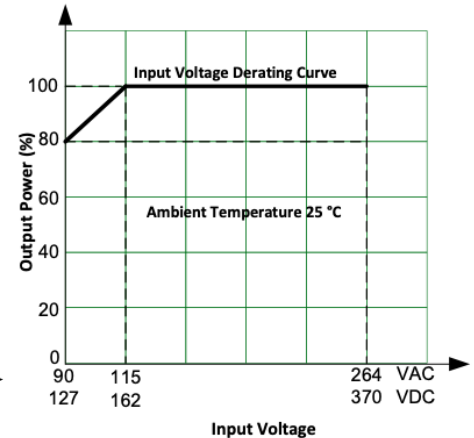
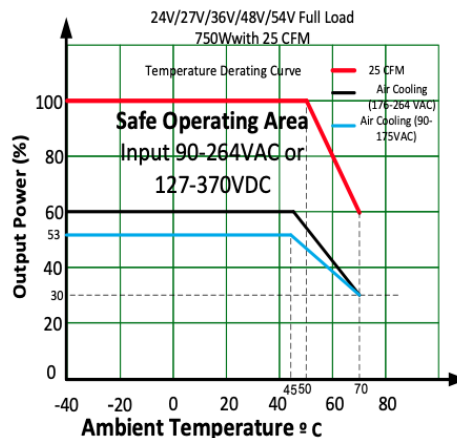
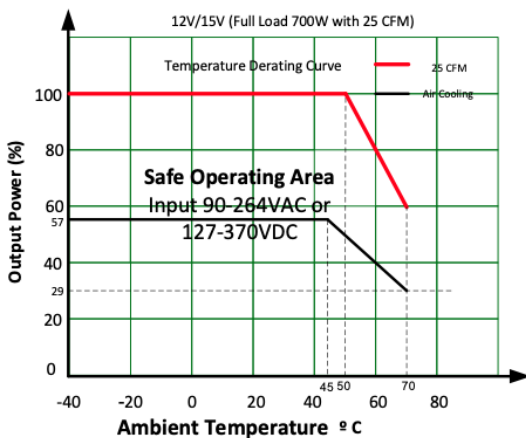
### General Specifications

Parameters	Conditions	Typical	Maximum	Units	
Protection class	Class I / Class II				
Over current protection	Hiccup, Auto recovery	≥ 105		% of Iout	
Over voltage protection	12Vout		15.6	VDC	
	15Vout		19.5	VDC	
	24Vout	Output Voltage turn off, Re-power on for recover		31.2	VDC
	27Vout			35.1	VDC
	36Vout			46.8	VDC
	48Vout			60	VDC
54Vout		64	VDC		
Short circuit protection	Recovery time < 5s after the short circuit disappear				
Over temperature protection	Recover automatically when the temperature drops				
No-load power consumption	Room temperature, 230 VAC input	0.5		W	
Operating temperature	See derating graph	-40 to +70		°C	
Storage temperature		-40 to +85		°C	
Remote Sense	When RS+ and RS- are connected to the system, with function of remote voltage compensation, if not needed, left RS+ and RS- open				
Power Derating	25 CFM	12V/15V(700W)	+50 to +70	>2.0	% / °C
		Others(750W)	+50 to +70	>2.0	

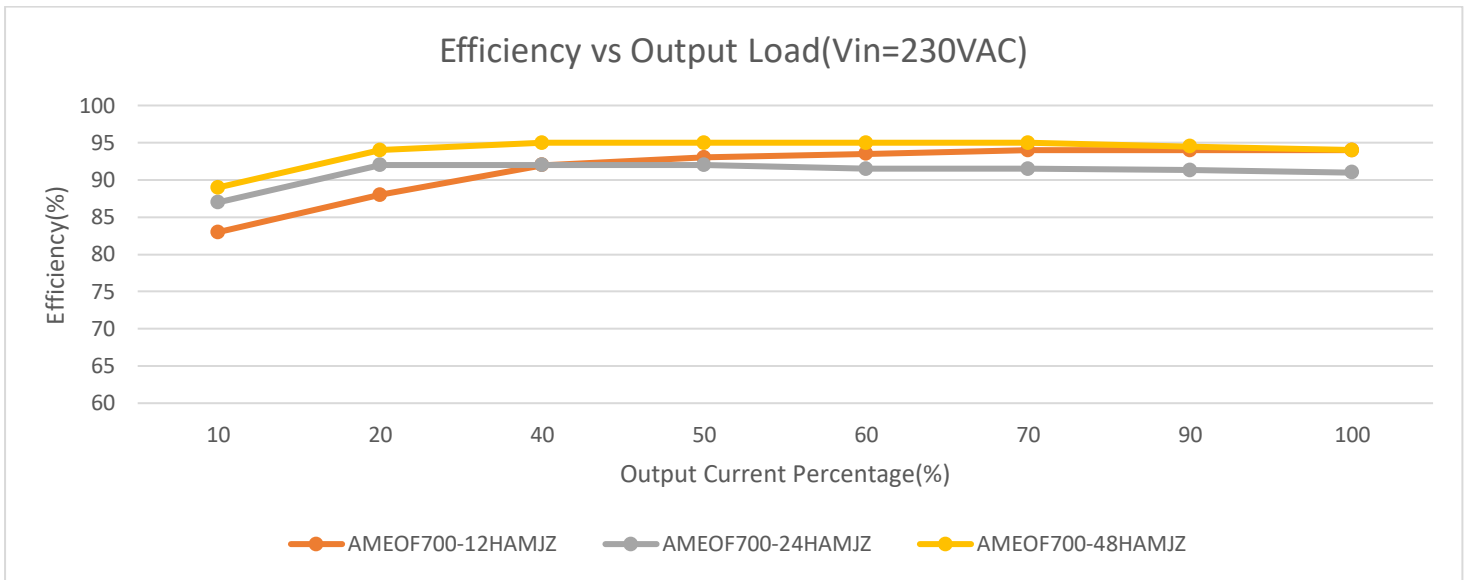
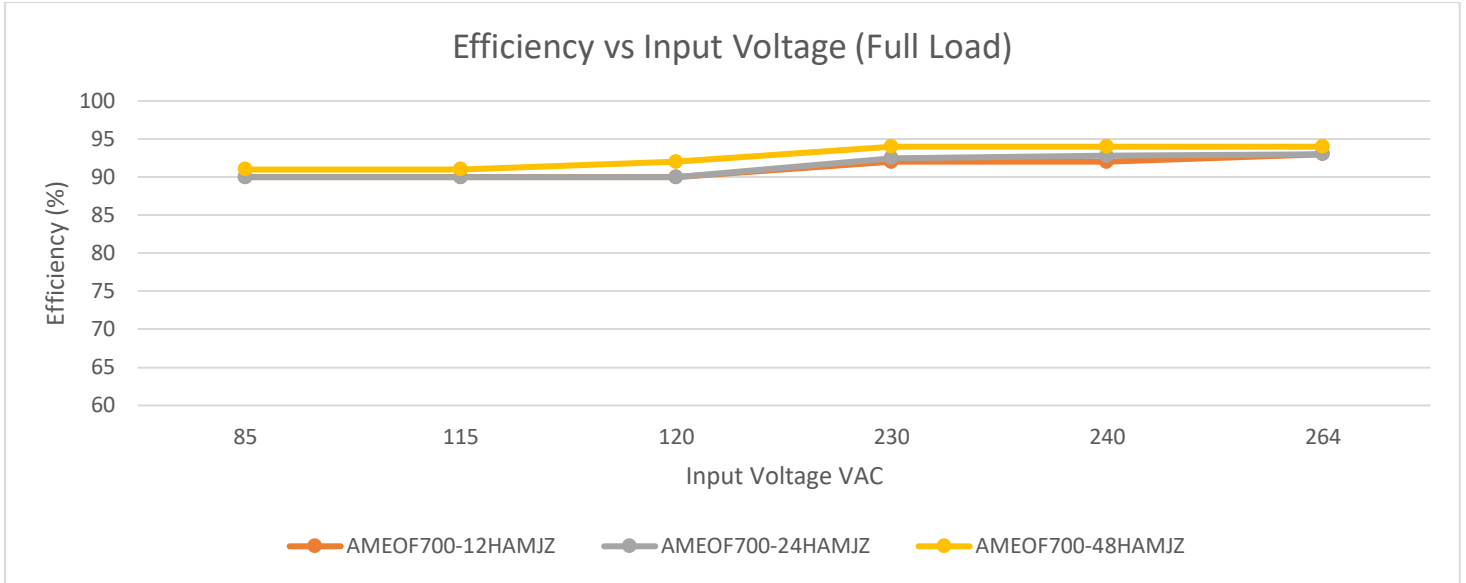
	Operating Temperature Derating	Air Cooling	12V/15V(400W)	+45 to +70	>7.9	W/°C	
			Others (450W)	90-175(VAC)	+45 to +70		>7.0
				176-264(VAC)	+45 to +70		>9.0
					Input Voltage Derating		90 VAC - 115 VAC
			127 VDC -162 VDC	0.57	%/VDC		
Temperature coefficient				±0.03		%/°C	
Cooling	Free air convection, forced air convection 25CFM						
Humidity	Non-condensing, storage			>10	95	% RH	
	Non-condensing, operating			>20	90	% RH	
Weight	Open frame			625		g	
Dimensions (L x W x H)	Open frame			5.00 x 3.00 x 1.69 inches (127 x 76.2 x 43.0 mm)			
MTBF	> 200 000 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	Design to meet IEC/EN62368-1, ES/EN60601-1, EN60335-1, GB4943.1	
Standards	EMC - Conducted and radiated emission	CISPR32 / EN55032, class B
	Harmonic Current	IEC/EN61000-3-2 Class A and Class D
	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/Line to Ground ±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 0% , 70% Criteria B

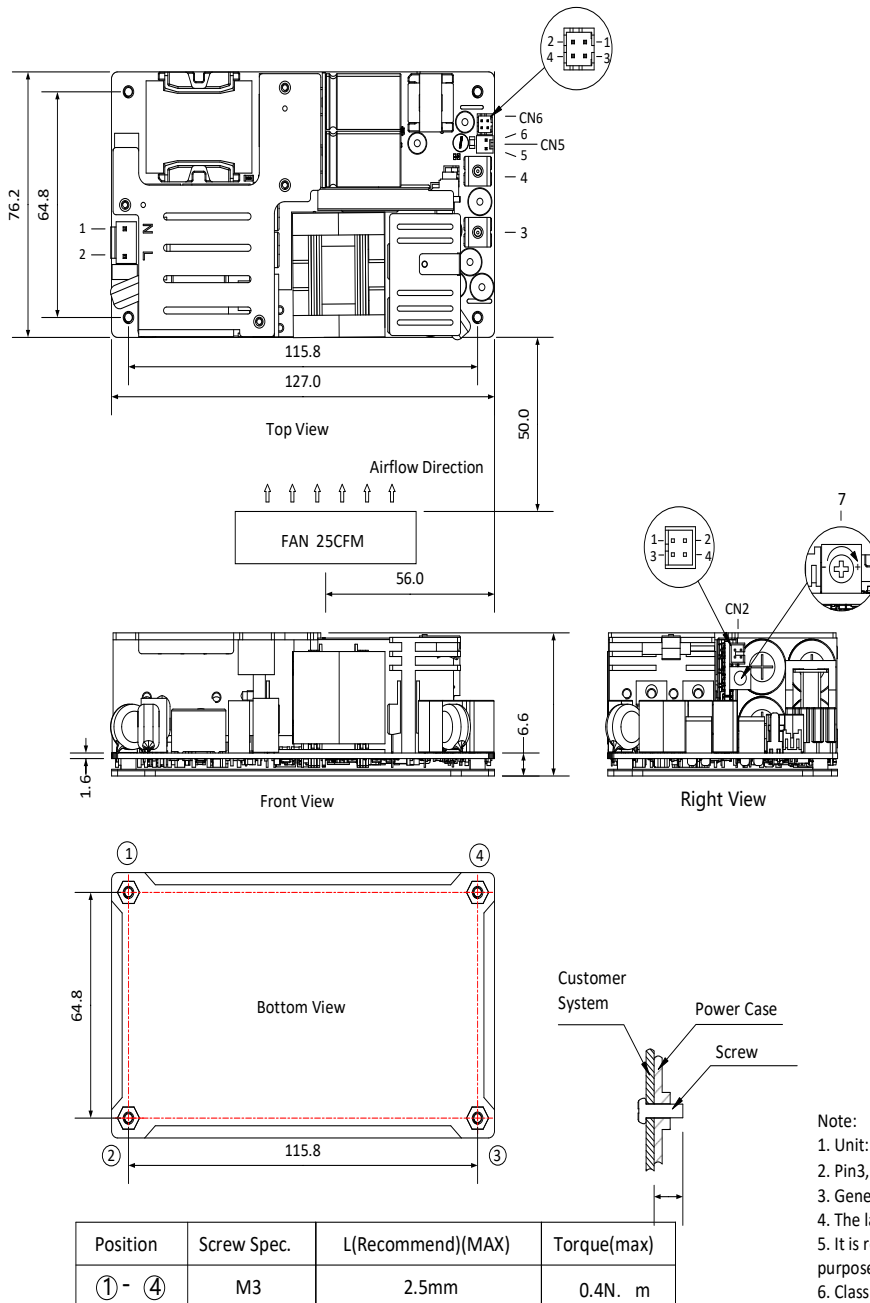
## Derating



Efficiency Curve



## Dimensions



THIRD ANGLE PROJECTION




Pin-Out		Customer Connector
Pin	Mark	
1	AC(N)	Housing: JST VHR-3 or equivalent Contact: JST SVH-21T-P1.1 or equivalent
2	AC(L)	
3	+Vo	
4	-Vo	
5	FAN+	CN5: Fan power output port Housing: TKP 2502 or Molex0511910200 or equivalent
6	FAN-	Contact: TKP 54T or Molex0508028100 or equivalent
7	ADJ Output adjustable resistor	

Pin-Out		Customer Connector
Pin	Mark	
1	+5V	Housing: TKP DH2-4P or HRS DF11-4DS-2C or equivalent
2	GND	Contact: TKP DHT or HRS DF11-22SC or equivalent
3	PS-ON	
4	GND	

Pin-Out		Customer Connector
Pin	Mark	
1	RS-	Housing: TKP DH2-4P or HRS DF11-4DS-2C or equivalent
2	RS+	Contact: TKP DHT or HRS DF11-22SC or equivalent
3	GND	
4	PG	

**Note:**

- Unit: mm[inch]
- Pin3, 4 connector tightening torque: M4, 1.2N·m(max)
- General tolerances: ±1.00[±0.039]
- The layout of the device is for reference only, please refer to the actual product
- It is recommended 10mm distance between the PCB and other components for safety purpose
- Class I system ① ② ④ positions shall be connected to the earth 

**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).