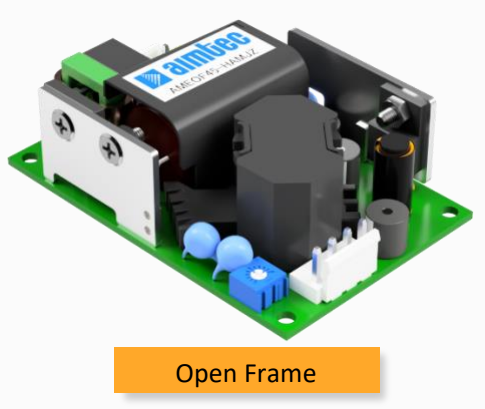


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AMEOF45-HAMJZ



The AMEOF45-HAMJZ series is one of Aimtec's compact size 45W AC/DC converter, which is 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.

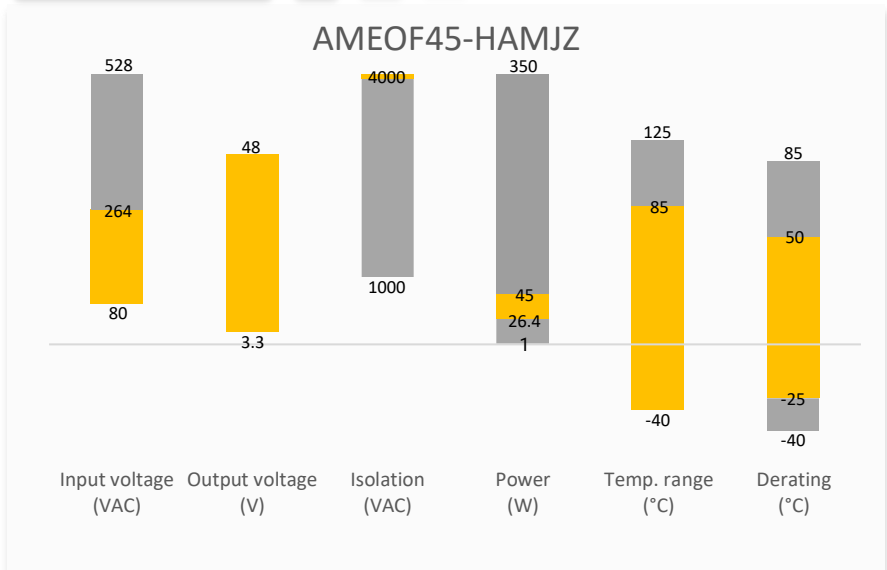
These converters offer excellent EMC and safety performance, which with ES60601-1, EN62368-1 approval and meet IEC/UL62368-1, IEC/EN60335-1, IEC/EN61558-1, IEC/EN60601-1, GB4943.1 standards.

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

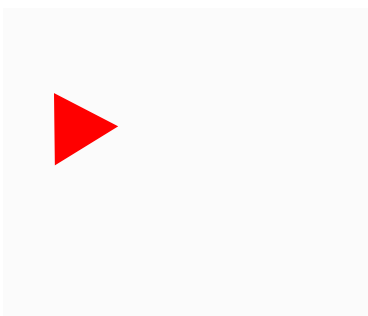
Features

- Universal Input: 80 - 264VAC/100 - 370VDC
- Low leakage current: 0.075mA max.
- High isolation voltage: 4000VAC
- Output short circuit, over-current, over-voltage protection
- Low no-load power consumption of 0.3W
- Suitable for Type BF application
- Meets 2xMOPP
- Certified : ES60601-1, EN62368-1
- Designed to meet IEC/UL62368-1, IEC/EN60335-1, IEC/EN61558-1, GB4943.1,

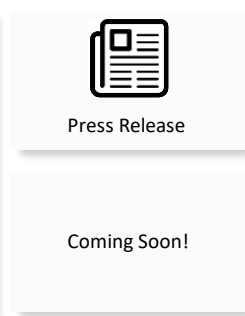
Summary



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)	Output Voltage (V)	Output Voltage Adjustable Range (V)	Output Current (A)	Maximum capacitive load (μ F)	Efficiency @230VAC Typ. (%)
AMEOF45-3SHAMJZ	80-264/47-63	100-370	26.4	3.3	2.97-3.63	8	20000	83
AMEOF45-5SHAMJZ	80-264/47-63	100-370	40	5	4.5-5.5	8	20000	85
AMEOF45-12SHAMJZ	80-264/47-63	100-370	45	12	10.2-13.8	3.75	4000	90
AMEOF45-15SHAMJZ	80-264/47-63	100-370	45	15	13.5-18	3	3500	90
AMEOF45-24SHAMJZ	80-264/47-63	100-370	45	24	21.6-28.5	1.875	1000	90
AMEOF45-36SHAMJZ	80-264/47-63	100-370	45	36	32.4-39.6	1.25	820	90
AMEOF45-48SHAMJZ	80-264/47-63	100-370	45	48	43.2-52.8	0.94	330	90

Add suffix -F for enclosed package. (ex. AMEOF45-12SHAMJZ-F is enclosed package version)

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Input current	115VAC		1.1	A
	230VAC		0.7	A
Inrush current	115VAC		40	A
	230VAC		60	A
Leakage	240VAC		0.075	mA

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	3.3, 5V, 0-100% load	\pm 2		%
	Others, 0-100% load	\pm 1		%
Line regulation	3.3, 5V, 100% load	\pm 0.8		%
	Others, 100% load	\pm 0.5		%
Load regulation	230VAC	\pm 1		%
Ripple & Noise*	3.3, 5, 12, 15V, tested with a 10 μ F ceramic capacitor	75	100	mV p-p
	24V, tested with a 1 μ F ceramic capacitor	80	120	mV p-p
	36, 48V, tested with a 0.1 μ F ceramic capacitor	100	150	mV p-p
Hold up time	115VAC	\geq 13		ms
	230VAC	\geq 65		ms

* Ripple and Noise are measured at 20MHz bandwidth. Please refer to the application note for specific details.

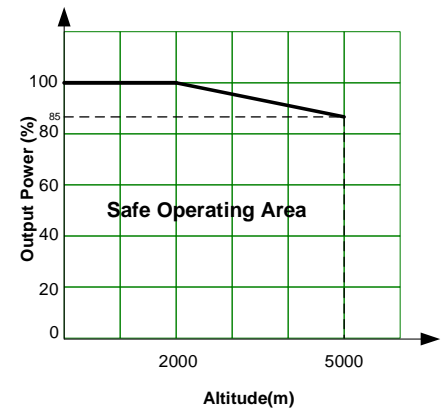
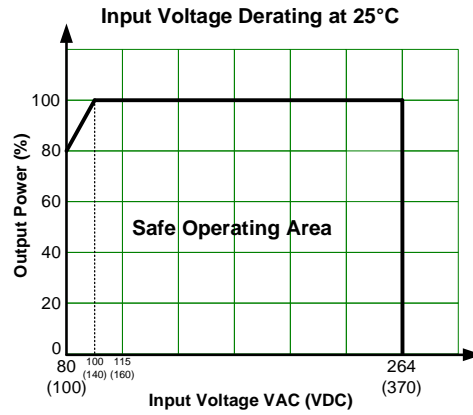
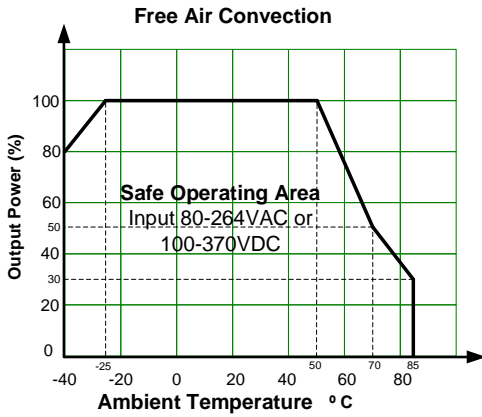
Isolation Specification

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	60 sec, leakage \leq 5mA	\geq 4000		VAC
Tested I/O to case voltage	60 sec, leakage \leq 5mA, suffix -F models	\geq 2500		VAC
Resistance I/O	500VDC	\geq 100		M Ω

General Specifications				
Parameters	Conditions	Typical	Maximum	Units
Protection class	Class II			
Over current protection	Auto recovery	≥ 120		% of Iout
Over voltage protection	3.3Vout, hiccup		5.25	VDC
	5Vout, hiccup		7	VDC
	12Vout, hiccup		16	VDC
	15Vout, hiccup		22	VDC
	24Vout, hiccup		32.4	VDC
	36Vout, hiccup		42.4	VDC
	48Vout, hiccup		57	VDC
Short circuit protection	Hiccup, Continuous, Auto recovery			
No-load power consumption		0.2	0.3	W
Operating temperature	See derating graph	-40 to +85		°C
Storage temperature		-40 to +85		°C
Operating altitude			5000	m
Power Derating	-40 °C to -25 °C	1.2		%/°C
	+50 °C to +70 °C	2.5		%/°C
	+70 °C to +85 °C	1.34		%/°C
	80VAC to 100VAC	1.0		%/VAC
	2000 - 5000m	5.0		%/1000m
Creepage		≥ 8		mm
Clearance		≥ 7.6		mm
Temperature coefficient		±0.02		%/°C
Cooling	Free air convection			
Humidity	Non-condensing, storage		90	% RH
Weight	Open frame	95		g
	Enclosed	150		g
Dimensions (L x W x H)	Open frame	3.00 x 2.00 x 1.04 inches (76.2 x 50.8 x 26.5 mm)		
	Enclosed	3.60 x 2.38 x 1.31 inches (91.4 x 60.5 x 33.3 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.				

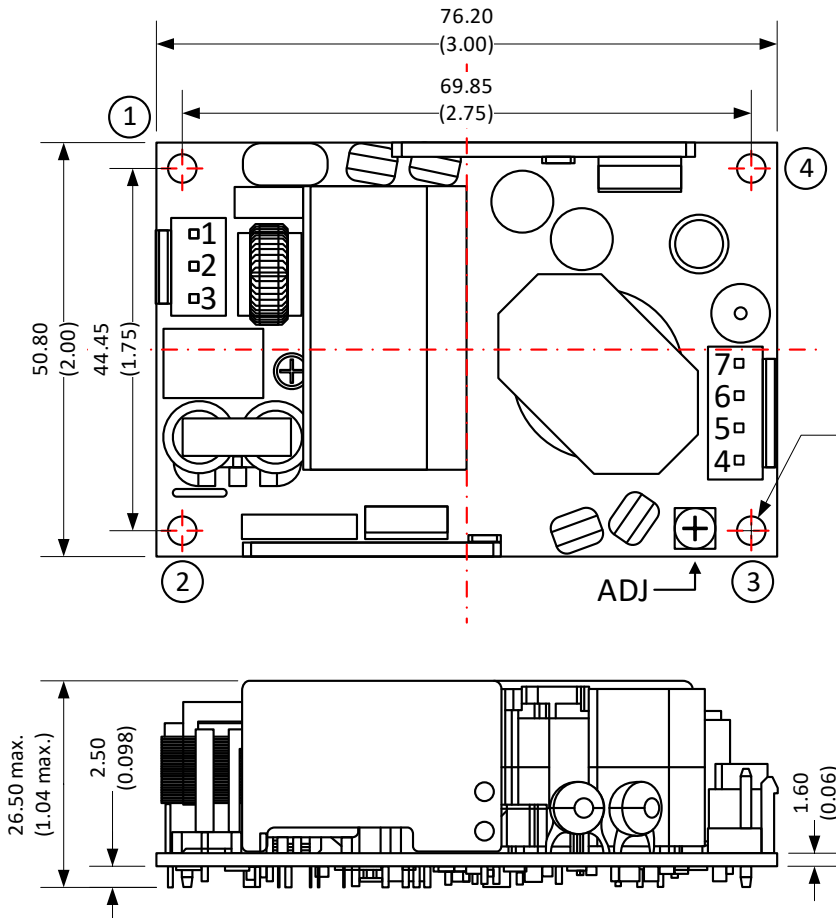
Safety Specifications		
Parameters		
Agency approvals	CE: EN62368-1	
Standards	Design to meet IEC/EN/UL62368-1, IEC/EN60335-1, IEC/EN61558-1, IEC/EN60601-1, EN60601-1-2 Ed4, GB4943.1	
	EMC - Conducted and radiated emission	CISPR32 / EN55032 / EN55011, class B
	Electrostatic Discharge Immunity	IEC 61000-4-2 Contact ±8KV, Air ±15KV, Criteria A
	RF, Electromagnetic Field Immunity	IEC 61000-4-3 20V/m, Criteria A
	Electrical Fast Transient/Burst Immunity	IEC 61000-4-4 ±2KV, Criteria A
	Surge Immunity	IEC 61000-4-5 L-L ±2KV, Criteria A
	RF, Conducted Disturbance Immunity	IEC 61000-4-6 20Vr.m.s, Criteria A
	Voltage dips, Short Interruptions Immunity	IEC 61000-4-11 Criteria B

Derating

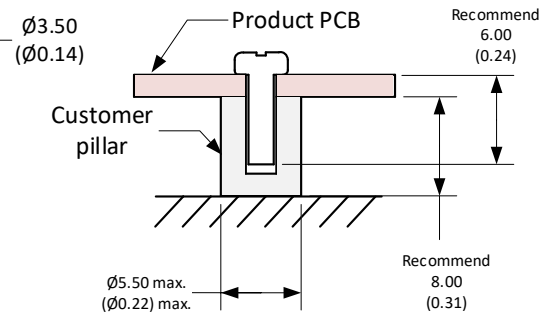


Dimensions

Open frame model

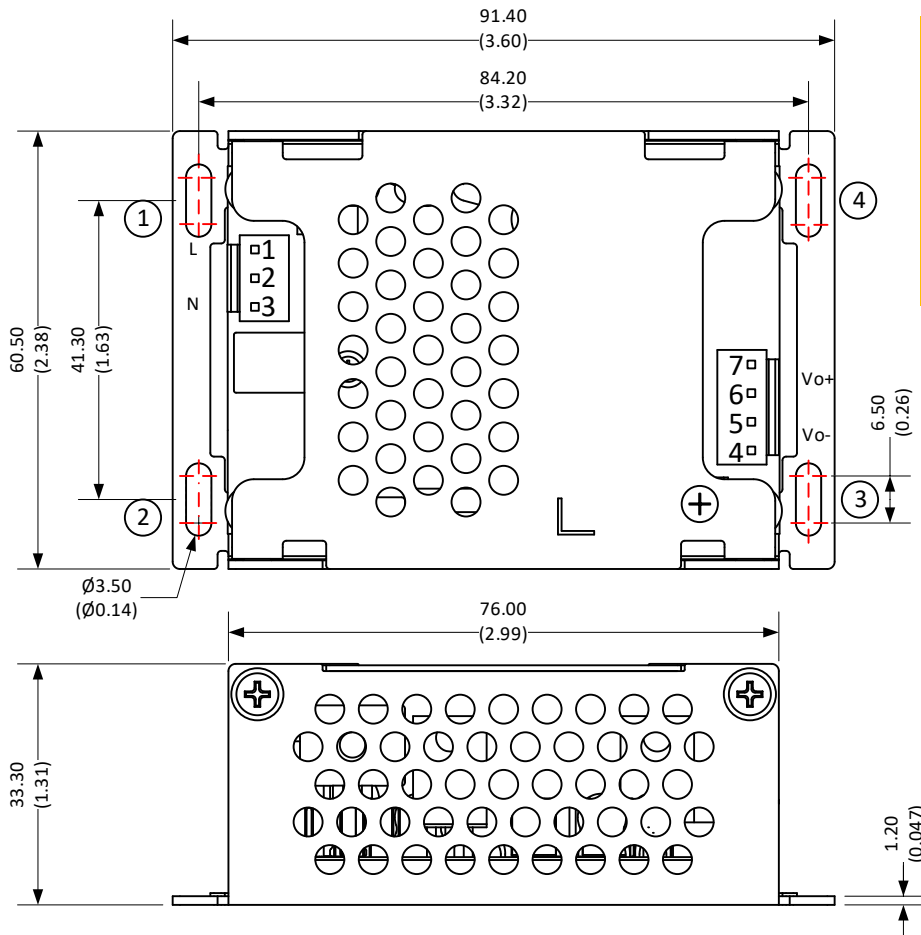


Pin Output Specifications		
Pin	Function	Recommended connector
1	AC Input (L)	JST VHR
2	No pin	JST SVH-21T-P1.1
3	AC Input (N)	or equivalent
4	-V Output	JST VHR
5	-V Output	JST SVH-21T-P1.1
6	+V Output	or equivalent
7	+V Output	

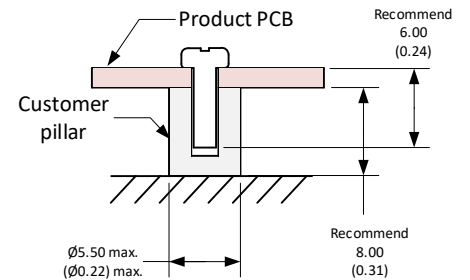


Note:
Unit: mm [inch]
General tolerance: ± 0.5 (± 0.02)
Mounting screw: M3
Mounting screw tightening torque: 0.4N max.

Enclosed model



Pin Output Specifications		
Pin	Function	Recommended connector
1	AC Input (L)	JST VHR JST SVH-21T-P1.1 or equivalent
2	No pin	
3	AC Input (N)	JST VHR JST SVH-21T-P1.1 or equivalent
4	-V Output	
5	-V Output	
6	+V Output	
7	+V Output	



Note:
Unit: mm [inch]
General tolerance: ± 0.5 (± 0.02)
Mounting screw: M3
Mounting screw tightening torque: 0.4N max.

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