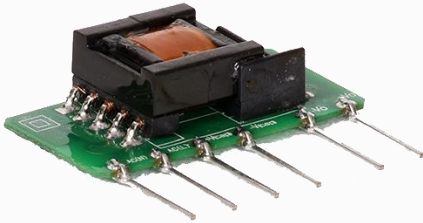


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samples

AMEOF5-BJZ



Open Frame SIP

The AMEOF5-BJZ is a compact open frame AC/DC converter that offers an ultra-wide input voltage range of 90-528VAC. This converter is part of Aimtec's wide input voltage range product family offered in 1, 2, 3, 5, 10 & 20 watts.

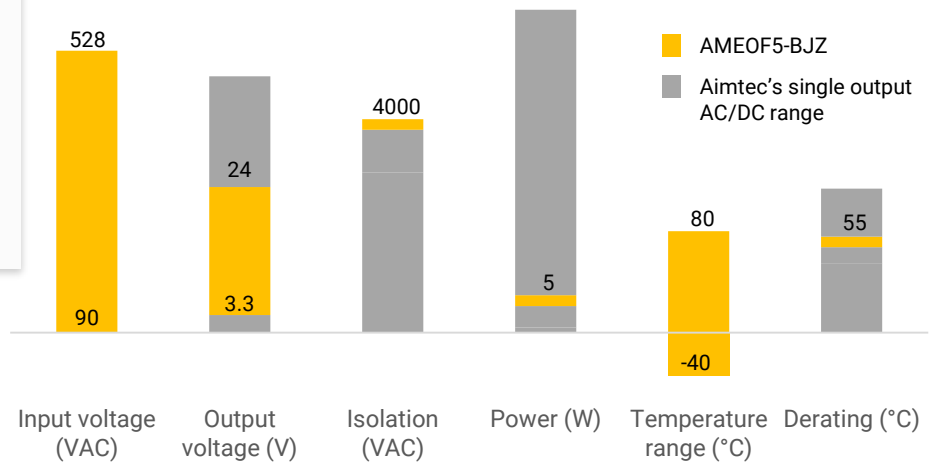
Aimtec's AMEOF5-BJZ features low power consumption, high efficiency & reliability, and 4000VAC isolation. It also meets the IEC/UL/EN62368 standards, which makes it suitable for many industrial applications such as controls and instrumentation. Furthermore, the ultra-wide input voltage range also makes this converter a perfect candidate for 3 phase applications.

Features

- Input: 90-528VAC, 100-745VDC
- I/O Isolation 4000VAC
- Continuous Short circuit protection
- Operating Temp: -40 to +85°C
- Low power consumption $\leq 0.5W$ at 528VAC
- Compact open frame SIP
- Over current protection
- Class II power supply

Summary

Situating the AMEOF5-BJZ among Aimtec's single output AC/DC converters



Training

AMEOF5-BJZ
Product Overview



Product Training Video
(click to open)



Press Release

RoHS Soldering profiles

Application Notes

Applications



Industrial



Automation



Test Equipment



3-Phase
Metering

Models & Specifications

Single Output							
Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Full power temperature range (°C)	Output Voltage (V)	Output Current max (A)	Maximum capacitive Load (230VAC) (µF)	Efficiency 230VAC (%)
AMEOF5-3.3SBJZ	90-528/47-63	100-745	-20 to +55	3.3	850	2200	63
AMEOF5-5SBJZ	90-528/47-63	100-745	-20 to +55	5	850	1500	67
AMEOF5-9SBJZ	90-528/47-63	100-745	-20 to +55	9	560	680	70
AMEOF5-12SBJZ	90-528/47-63	100-745	-20 to +55	12	420	470	76
AMEOF5-15SBJZ	90-528/47-63	100-745	-20 to +55	15	340	330	76
AMEOF5-24SBJZ	90-528/47-63	100-745	-20 to +55	24	210	100	76
AMEOF5-3.3SLBJZ	90-528/47-63	100-745	-20 to +55	3.3	850	2200	63
AMEOF5-5SLBJZ	90-528/47-63	100-745	-20 to +55	5	850	1500	67
AMEOF5-9SLBJZ	90-528/47-63	100-745	-20 to +55	9	560	680	70
AMEOF5-12SLBJZ	90-528/47-63	100-745	-20 to +55	12	420	470	76
AMEOF5-15SLBJZ	90-528/47-63	100-745	-20 to +55	15	340	330	76
AMEOF5-24SLBJZ	90-528/47-63	100-745	-20 to +55	24	210	100	76

Input Specification				
Parameters	Conditions	Typical	Maximum	Units
Current	115VAC		200	mA
	230VAC		100	mA
	480VAC		70	mA
Inrush current <2ms	115VAC	10		A
	230VAC	17		A
	480VAC	28		A
External fuse	Recommended slow blow type	2		A
Input dissipation	No Load, 230VAC		0.3	W
	No Load, 528VAC		0.5	
Leakage current	230VAC/50Hz	0.25		mA

Output Specification				
Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±2		%
Line regulation	Full load, main input range	±1		%
Load regulation	0-100% load	±1		%
Minimum load	Single output	0		A
Ripple & Noise*	3.3,5,9,12V Output		150	mV p-p
	15,24V Output		250	mV p-p
	36V Output		360	mV p-p
	48V Output		480	mV p-p
Hold-up time	115VAC, 20MHz bandwidth	10		ms

* 20MHz bandwidth with a 0.1uF CC and a 10uF EC

Isolation Specifications				
Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec		4000	VAC
Isolation Resistance		>1000		MΩ

General Specifications				
Parameters	Conditions	Typical	Maximum	Units
Switching frequency		70		KHz
Over current protection	Auto-recovery	120-400		% of I out
Short circuit protection	Hiccup, Continuous			
Short circuit restart	Auto-recovery			
Operating temperature	See derating curve	-40 to +85		°C
Storage temperature		-40 to +105		°C
Temperature coefficient		±0.15		% / °C
Cooling	Free air convection			
Humidity			85	% RH
Weight		7.5		g
Dimensions (L x H x W)	1.75 x 0.94 x 0.51 inches 44.5 x 24 x 13 mm			
MTBF	>300,000 hours (MIL-HDBK -217F, Ground Benign, 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.

Environmental Specifications

Vibration	Test mode	10-500Hz
	Acceleration	2G, 10min one cycle, every axis tested, 60min total duration

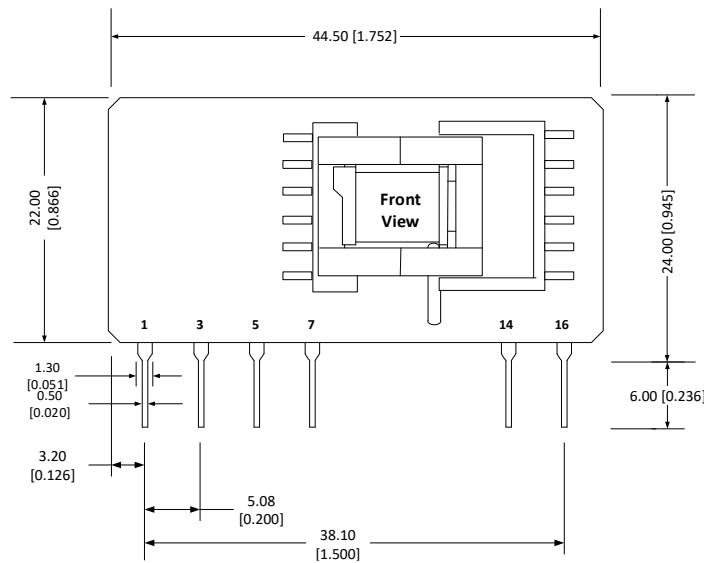
Safety Specifications

Standards	IEC/EN/UL62368 pending approval	
	CISPR32/EN55032/FCC part 15, Class A & B, with external filter circuits, as referenced	
	IEC 61000-4-2, Contact $\pm 4KV$, Criteria B	
	IEC 61000-4-3, 10V/m, Criteria A, with Class B external filter, as referenced	
	IEC 61000-4-4, $\pm 2KV/\pm 4KV$, Criteria B, with Class A/B external filter referenced	
IEC 61000-4-5, $\pm 1KV/\pm 2KV$, Criteria B, with Class A/B external filter referenced		
IEC 61000-4-6, 3Vrms, Criteria A, with Class B external filter, as referenced		
IEC 61000-4-11, 0-70%, Criteria B, with Class B external filter, as referenced		

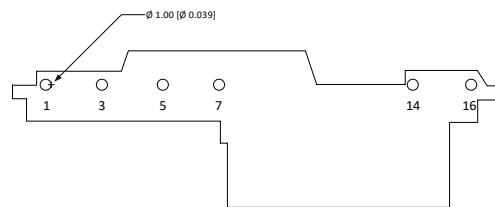
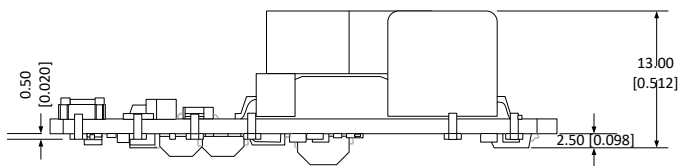
Dimensions

Pin Out Specifications

Pin	Single
1	AC N
3	AC L
5	+V sc
7	-V sc
14	-V Output
16	+V Output

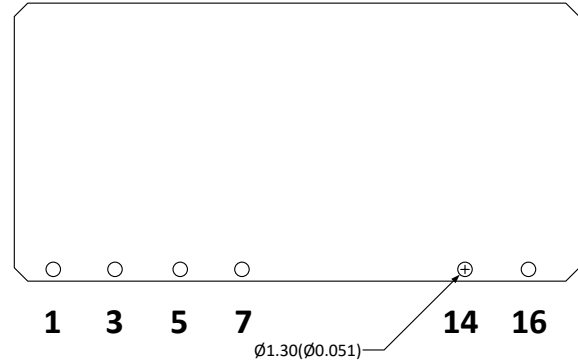
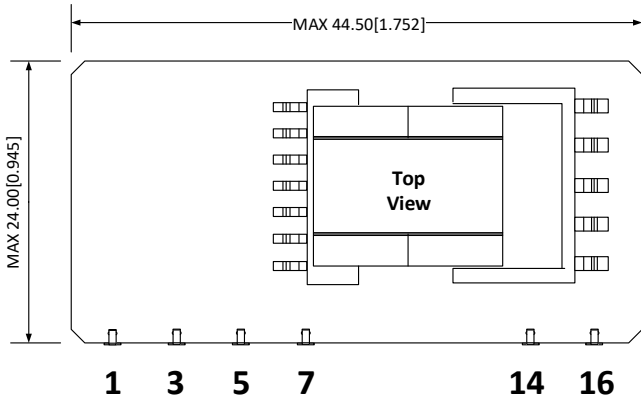


Bottom View

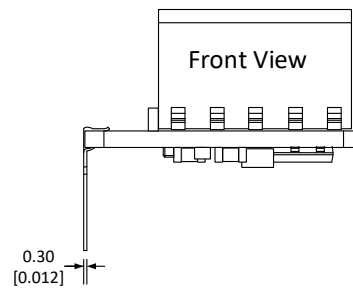
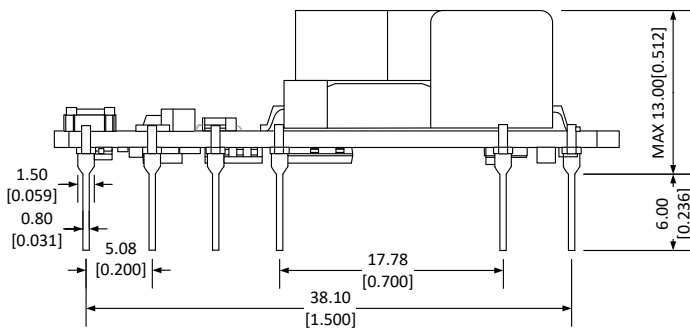


Note:
Unit: mm [inch]
Pin section tolerances: ± 0.10 [± 0.004]
General tolerances: ± 0.50 [± 0.020]

L Model Dimensions

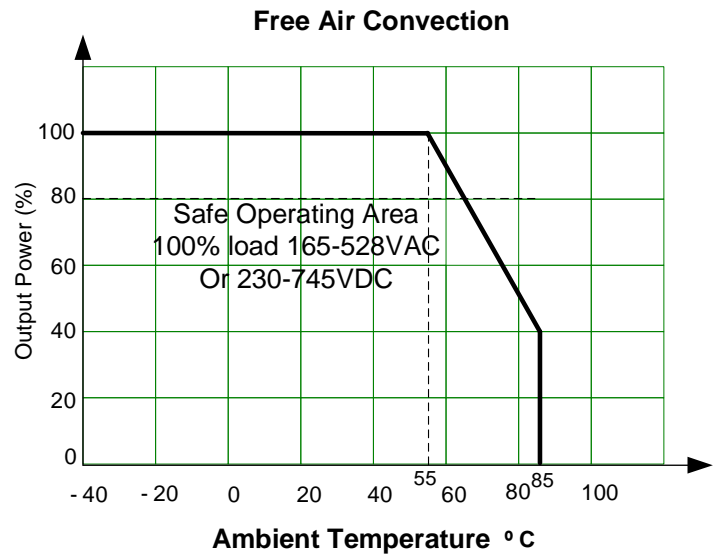
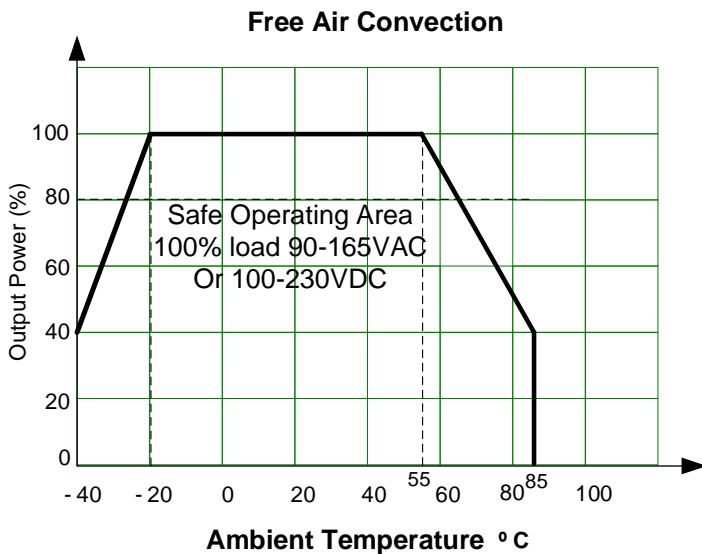


Side View



Note:
Unit: mm [inch]
Pin section tolerances: ± 0.10 [± 0.004]
General tolerances: ± 0.50 [± 0.020]

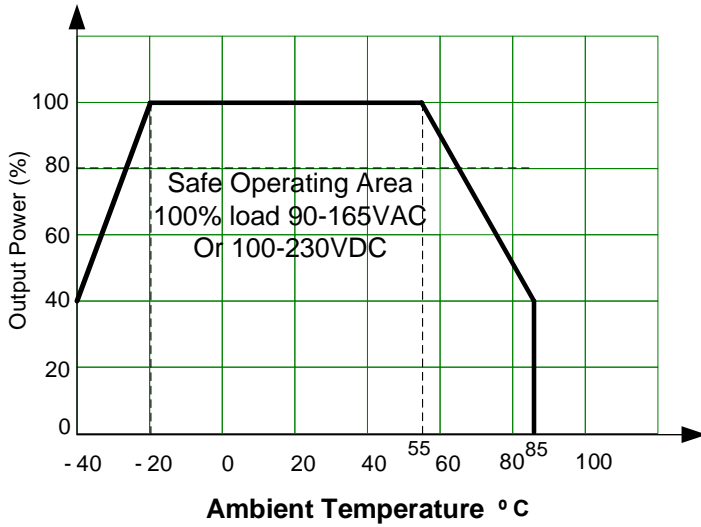
Derating



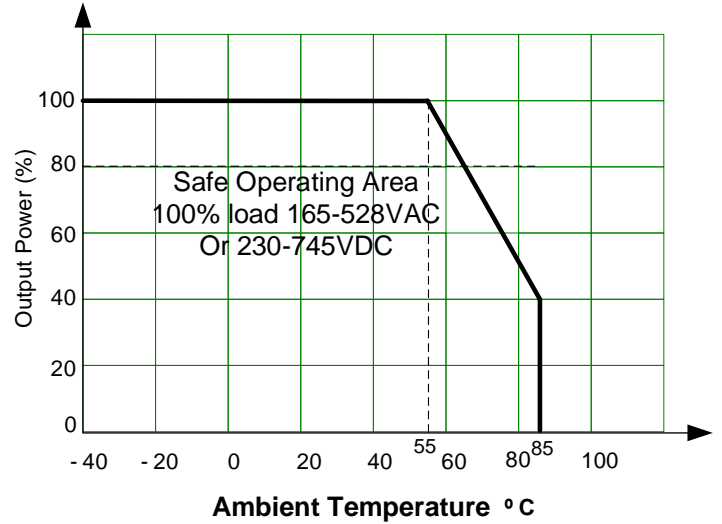
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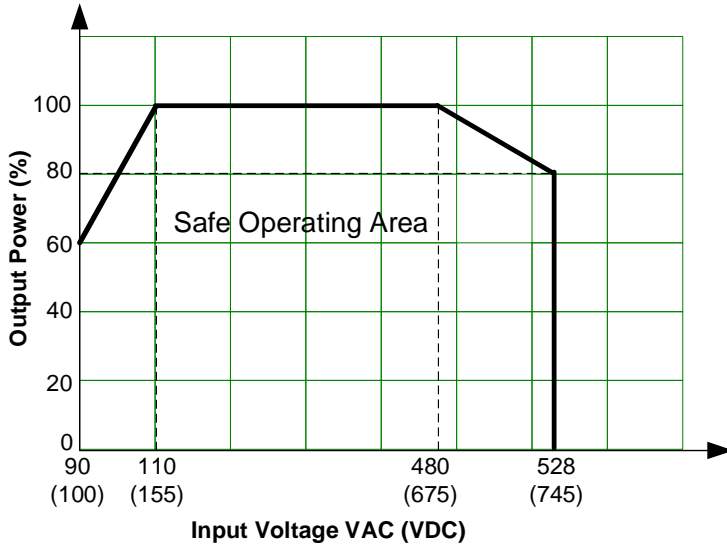
Free Air Convection



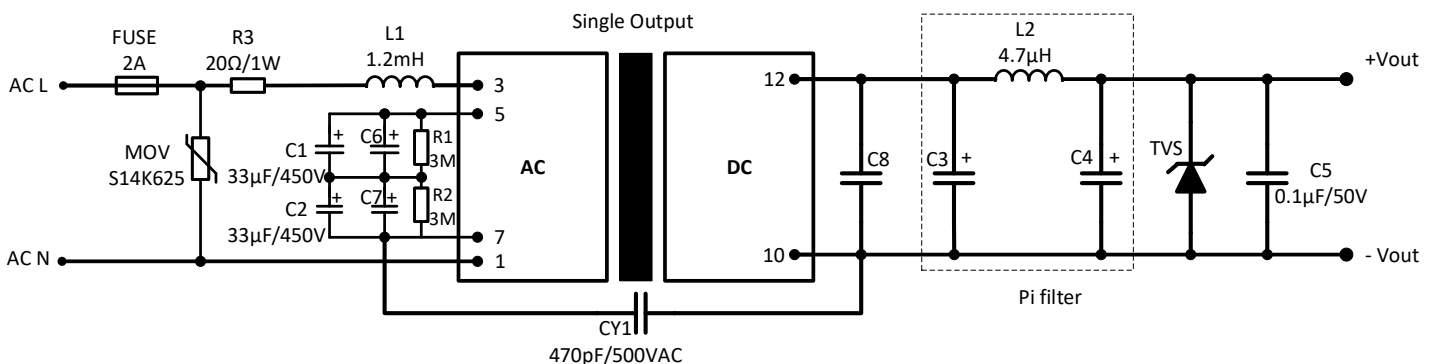
Free Air Convection



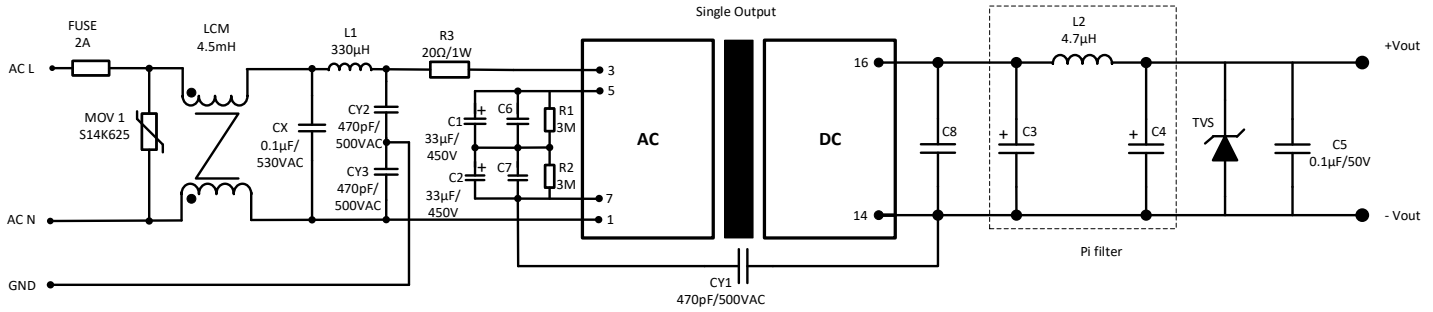
Free Air Convection at 25°C



Recommended EMC class A external circuit



Recommended EMC class B external circuit



Model	C6/C7	C8	C3	C4	TVS
3.3 Vout					7V
5 Vout			470 μ F/16V (Solid Capacitor)	470 μ F/ 35V	12V
9 Vout			270 μ F/16V (Solid Capacitor)	220 μ F/ 16V	20V
12 Vout			1000 μ F/35V	330 μ F/ 35V	30V
15 Vout	0.068 μ F/630V	10 μ F/25V	470 μ F/35V	470 μ F/ 35V	
24 Vout					

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