AMEM5-EZ

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Encapsulated

AMEM5-EZ series is an efficient 5W AC-DC power supply module. Offering a commercial input voltage range of 90-264VAC, output voltage ranges from 3.3-48V, and safer isolation.

This new series offers great operating temperatures, from -25°C to 70°C with full power up to 50°C and features an isolation of 3000VAC for improved reliability and system safety. Furthermore, an output short circuit protection (OSCP), output over-current protection (OCP) and an output over-voltage protection (OVP) come standard with the series.

The AMEM5-EZ is suitable for grid power, LED, instrumentation, industrial controls, communication, and civil applications.

Features

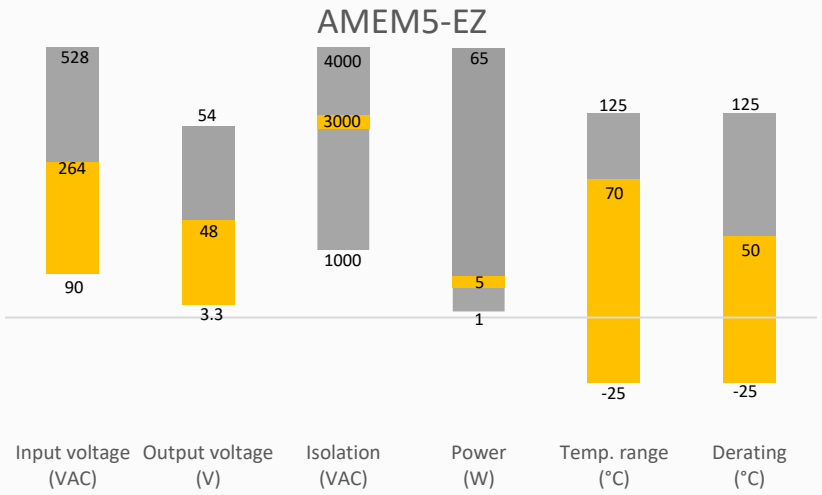
- Ultra Compact Size 1.0" x 1.0" x 0.63" Package
- Universal Input: 90 - 264VAC/120 - 370VDC
- Operating Temp: -25 °C to +70 °C
- High isolation voltage: 3000VAC
- Output short circuit, over-current, over-voltage protection
- Efficiency up to 85%
- Designed to meet: UL 62368-1, IEC 62368-1

RoHS

3yr Warranty

CE

Summary



Training

Product Training Video (click to open)

Press Release

Coming Soon!

Application Notes

Applications

Power Grid

Industrial

Telecom

Instrumentation

Models & Specifications

Single Output							
Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Output Voltage (V)	Output Current (mA)	*Ripple & Noise (mV)	Maximum capacitive load (µF)	Efficiency Typ. (%)
AMEM5-3SEZ	90-264/47-63	120-370	3.3	1515	60	2200	73
AMEM5-5SEZ	90-264/47-63	120-370	5	1000	60	1000	80
AMEM5-9SEZ	90-264/47-63	120-370	9	555	90	300	81
AMEM5-12SEZ	90-264/47-63	120-370	12	416	120	160	81
AMEM5-15SEZ	90-264/47-63	120-370	15	333	150	100	82
AMEM5-24SEZ	90-264/47-63	120-370	24	208	240	43	82
AMEM5-48SEZ	90-264/47-63	120-370	48	104	480	10	84
* Ripple & noise is measured by using 20 MHz bandwidth, measured with a 10uf electrolytic capacitor paralleled with a 1uf ceramic capacitor across each output by full load. Please refer to the Parallel Lines Measure.							

Input Specifications				
Parameters	Conditions	Typical	Maximum	Units
Rated Input Voltage	Vo, Io nom	100~240		VAC
Inrush current	115VAC, Io nom		10	A
	230VAC, Io nom		20	A
Input Fuse	FUSE 2.5A/250V (Slow blow)			

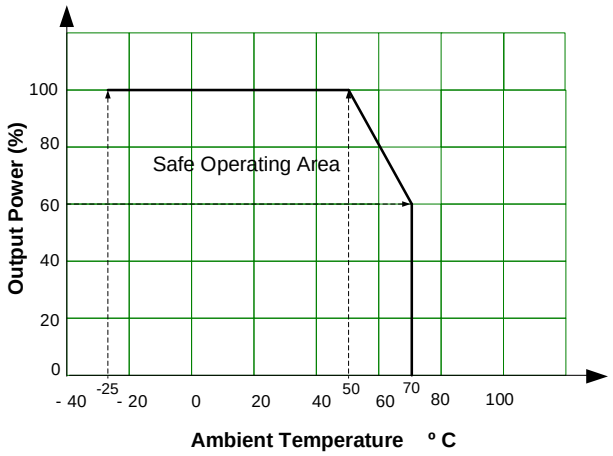
Output Specifications				
Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	Vi, Io Nom, 3.3V / 5V output models		±3	%
	Vi, Io Nom, other output models		±2	%
Line regulation	Vi nom, Io nom		±1	%
Load regulation			±1	%
Minimum Load	Vi nom	0		A
Transient Recovery time	Vi nom, Io nom = ←→0.5 Io nom	1000		uS

Isolation Specification				
Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	5 sec, leakage ≤ 5mA	3000		VAC
Resistance	500VDC	>100		MΩ

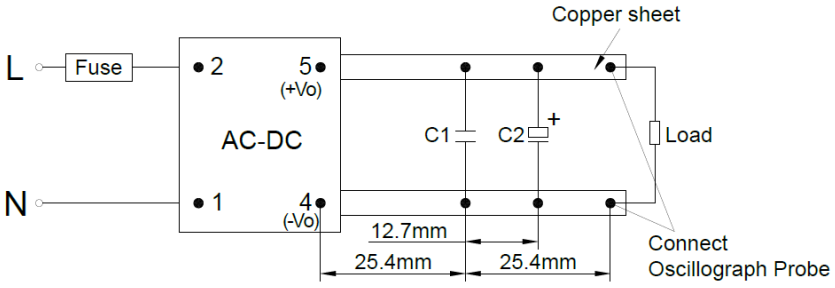
General Specifications				
Parameters	**Conditions**	**Typical**	**Maximum**	**Units**
Over current protection	Auto recovery	≥ 110		% of Iout
Over voltage protection	120-150% rated Vout, Protection type: Zener diode clamp			
Short circuit protection	Auto recovery			
Switching Frequency		65		KHz
Operating temperature	See derating graph	-25 to +70		°C
Storage temperature		-40 to +85		°C
Power Derating	+50 °C to +70 °C	2		%/°C
Cooling	Free air convection			
Humidity	Vi nom, Io nom		95	% RH
Weight		20		g
Dimensions (L x W x H)	1.00 x 1.00 x 0.63 inches (25.40 x 25.40 x 16.10 mm)			
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	Designed to meet UL 62368-1, IEC 62368-1	
	EMI Conducted & Radiated	EN55032, CLASS B
	EMS Immunity	EN61000

Derating

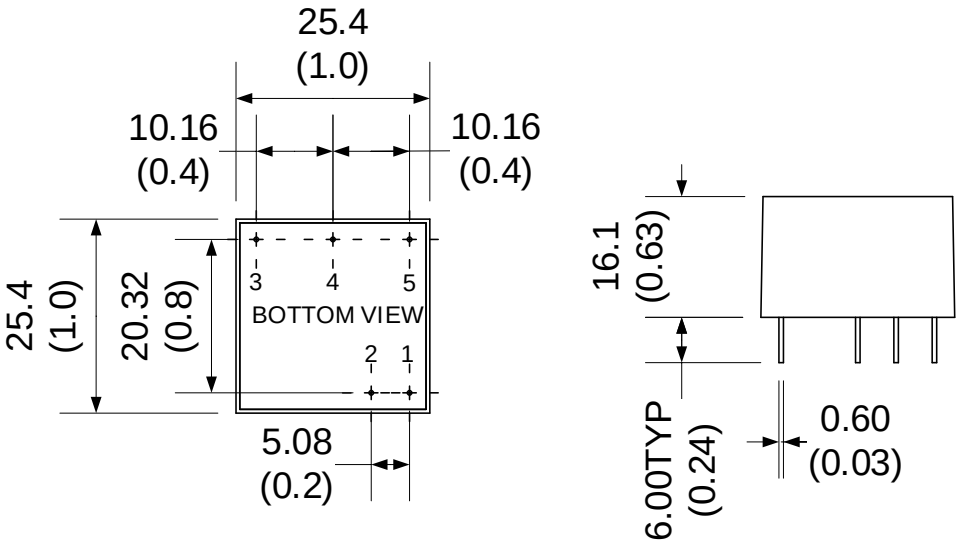


Parallel Lines Measure



C1:Ceramic capacitor,1uF; C2:Electrolytic capacitor,10uF

Dimensions



Pin Output Specifications	
Pin	Function
1	AC Input (N)
2	AC Input (L)
3	NC
4	-V Output
5	+V Output

Unit:mm(inch)
Unless otherwise specified, all tolerances are ±0.50(0.02)

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.