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AMEM1-EZ



Encapsulated

AMEM1-EZ series is an efficient 1W AC-DC power supply module. Offering a commercial input voltage range of 90-264VAC, output voltage ranges from 3.3-48V, and safer isolation.

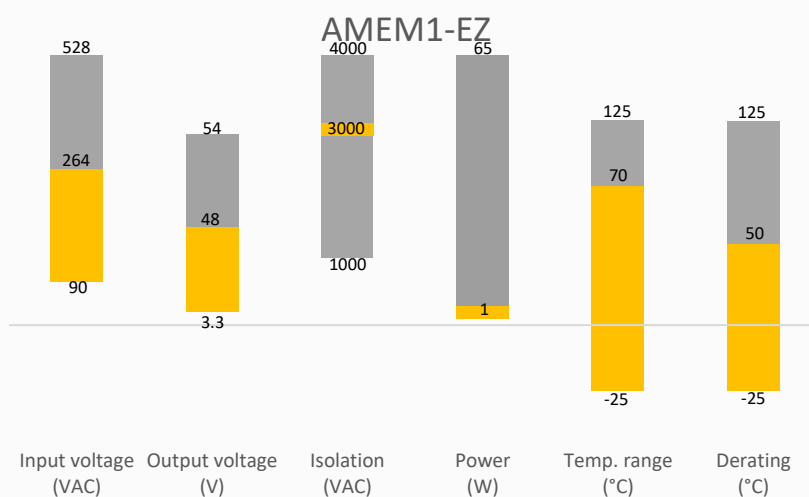
This new series offers great operating temperatures, from -25°C to 70°C with full power up to 50°C and features an isolation of 3000VAC for improved reliability and system safety. Furthermore, an output short circuit protection (OSCP), output over-current protection (OCP) and an output over-voltage protection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

The AMEM1-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 76%
- Certified: UL 62368-1
- Designed to meet: IEC 62368-1
- Made in Taiwan

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. (%)
AMEM1-3SEZ	90-264/47-63	120-370	3.3	303	60	2200	63
AMEM1-5SEZ	90-264/47-63	120-370	5	200	60	1000	69
AMEM1-9SEZ	90-264/47-63	120-370	9	111	90	300	71
AMEM1-12SEZ	90-264/47-63	120-370	12	84	120	160	71
AMEM1-15SEZ	90-264/47-63	120-370	15	67	150	100	72
AMEM1-24SEZ	90-264/47-63	120-370	24	41.7	240	43	74
AMEM1-48SEZ	90-264/47-63	120-370	48	20.8	480	10	76

* 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, lo nom	100~240		VAC
Inrush current	115VAC, lo nom		10	A
	230VAC, lo nom		20	A
Input Fuse	VDE/UL/CCC FUSE 2.5A/250V (Slow blow)			

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	Vi, lo Nom, 3.3V / 5V output models		±3	%
	Vi, lo Nom, other output models		±2	%
Line regulation	Vi nom, lo nom		±1	%
Load regulation			±1	%
Minimum Load	Vi nom	0		A
Transient Recovery time	Vi nom, lo nom = $\leftarrow \rightarrow 0.5$ lo 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

Agency Approvals UL 62368-1

Designed to meet IEC 62368-1

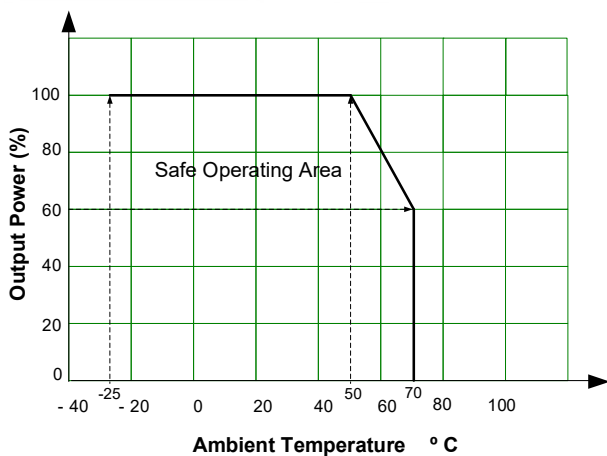
Standards EMI Conduction & Radiation

Compliance to EN55032, CLASS B

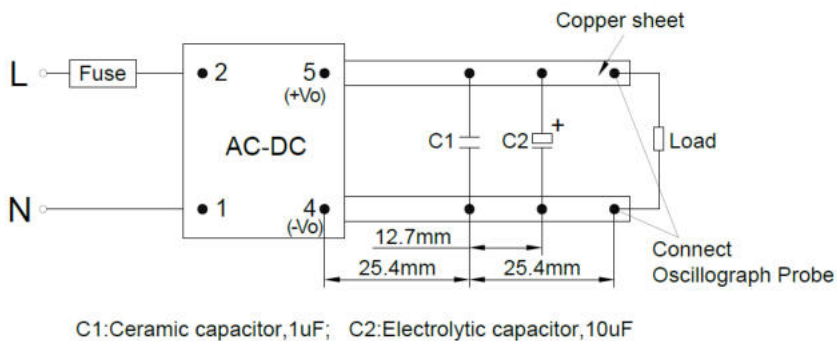
EMS Immunity

Compliance to EN61000

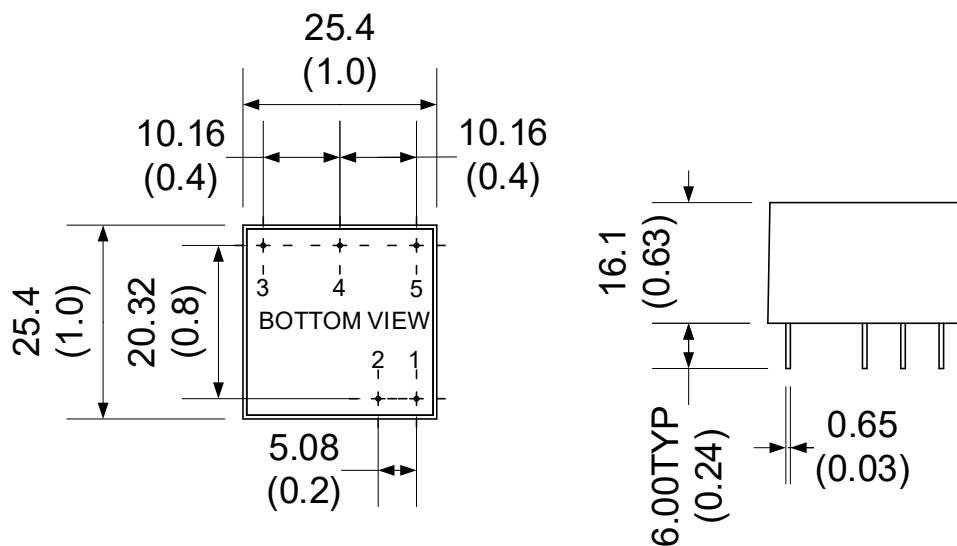
Derating



Parallel Lines Measure



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 $\pm 0.50(0.02)$

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.