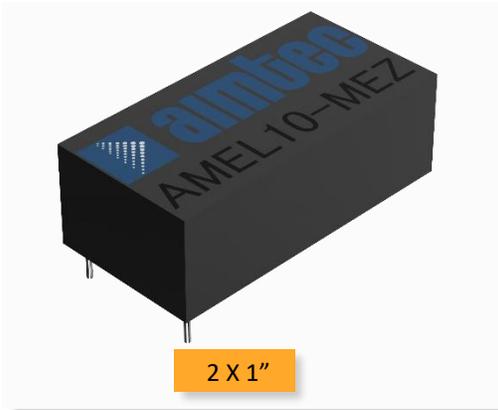


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## AMEL10-MEZ



The AMEL10-MEZ is a 10W 2 X 1" AC/DC converter that offers great cost savings thanks to an improved manufacturing process. It also features excellent reliability and performance while offering a standard input voltage range of 80-264VAC as well as an output voltage of 5 to 24V. This compact 2 X 1" design will surely benefit your new system.

This new series offers a great operating temperature range from -25 to 85°C. Also, an isolation of 4000VDC for improved reliability and system safety.

The AMEL10-MEZ is suitable for many applications such as industrial systems, portable equipment, and medical equipment.

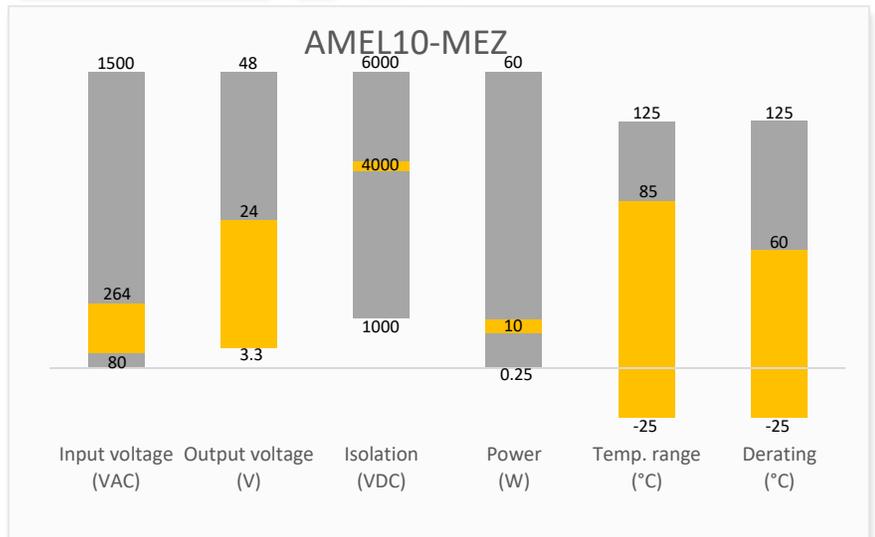
## Features



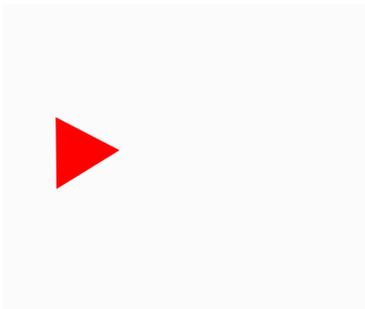
- Operating Temp: -25 °C to +85 °C
- Industry standard 2 X 1 pin-out
- Efficiency up to 83%
- Protection: Short Circuit / Overload / Over Voltage / Over Temperature
- No load power consumption < 0.1W
- Extremely low leakage current
- No minimum load required
- Agency approval UL 60601-1
- Made in Taiwan



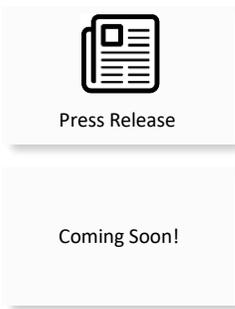
## Summary



## Training



Product Training Video  
(click to open)



Application Notes

## Applications



Industrial



Portable Equipment



IoT



Medical

## Models & Specifications



Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Output Wattage (W)	Output Voltage (VDC)	Output Current max (mA)	Efficiency Typ. (%)
AMEL10-5SMEZ	80-264/47-63	105-370	10	5	2000	79
AMEL10-12SMEZ	80-264/47-63	105-370	10.2	12	850	82
AMEL10-15SMEZ	80-264/47-63	105-370	10	15	670	82
AMEL10-24SMEZ	80-264/47-63	105-370	11	24	460	83

### Input Specification

Parameters	Conditions	Minimum	Typical	Maximum	Units
Rated Input Voltage	$V_o, I_o$ nom		100~240		VAC
Line Frequency	$V_i$ nom, $I_o$ nom	47	50/60	63	Hz
Inrush Current	$I_o$ nom, $V_i$ :115VAC			25	A
	$I_o$ nom, $V_i$ :230VAC			45	A
Input Current	115VAC, Full load		0.3		A
	23VAC, Full load		0.2		A
Input Fuse	VDE/UL/CCC FUSE 2.5A/250V (Slow blow)				

### Isolation Specification

Parameters	Conditions	Minimum	Typical	Maximum	Units
Tested I/O voltage	60 sec, leakage $\leq$ 5mA		4000		VAC
Resistance	Input / Output, @500VDC	100			M $\Omega$

### Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	5V output model	$\pm$ 3		%
	Others	$\pm$ 2		%
Line regulation	Full load	$\pm$ 0.3		%
Load regulation	0 to 100% load	$\pm$ 0.5		%
Ripple & Noise*	20MHz bandwidth, 5V		100	mV p-p
	20MHz bandwidth, 12V/15V		180	mV p-p
	20MHz bandwidth, 24V		200	mV p-p
Minimum load	Nominal $V_{in}$	0		%

\* Ripple and Noise are measured at 20MHz bandwidth with a 10 $\mu$ F electrolytic capacitor and a 1 $\mu$ F ceramic capacitor. Please refer to the application note for specific details.

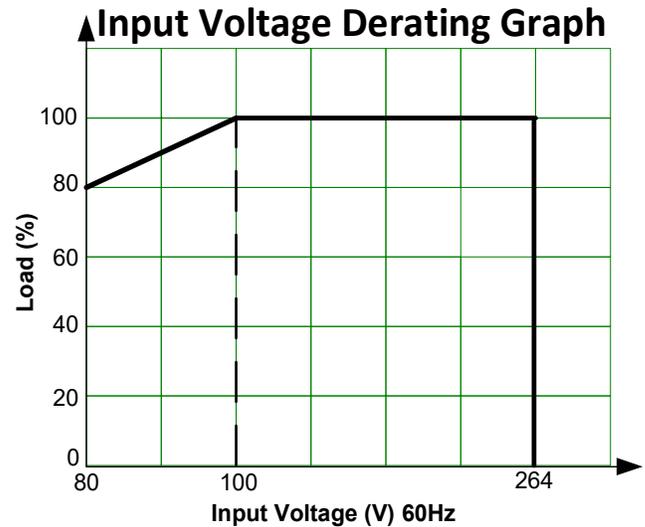
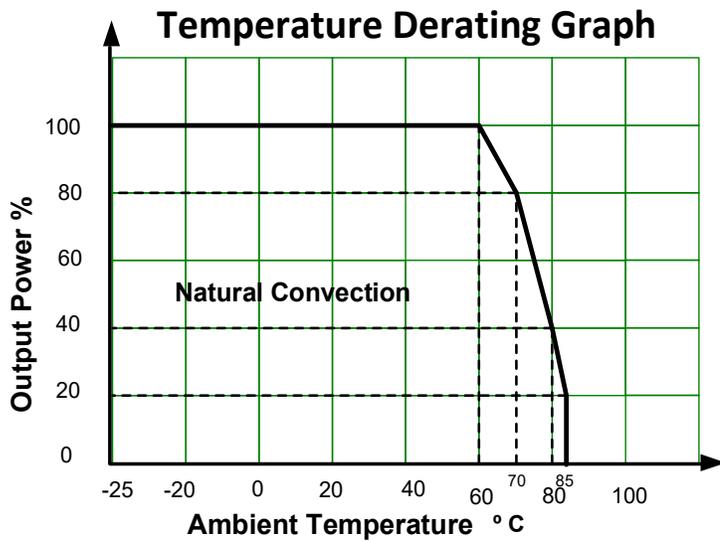
### General Specifications

Parameters	Conditions	Typical	Maximum	Units
Protection class	Class II			
Overload protection	Auto recovery	$\geq$ 110		% of $I_{out}$
Over voltage protection	Zener diode clamp	$\geq$ 110	150	% of $V_{out}$
Short circuit protection	Hiccup, Continuous, Auto recovery			
Over temperature protection	Shut-down, Auto-recovery			
Operating temperature	See derating graph	-25 to +85		$^{\circ}$ C

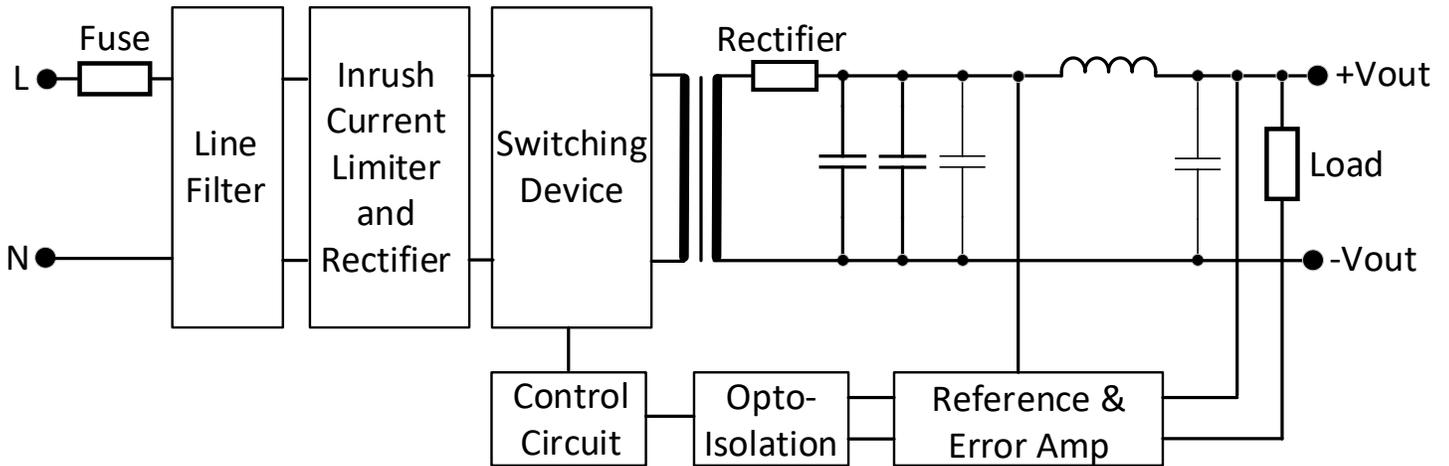
Storage temperature		-40 to +100		°C
Power Derating	+60 °C to +70 °C	2		%/°C
	+70 °C to +85 °C	4		%/°C
	80VAC to 100VAC	2		%/VAC
Cooling	Free air convection			
Humidity	Non-condensing		95	% RH
Case material	Black plastic (flammability to UL 94V-0)			
Weight		17.5		g
Dimensions (L x W x H)	2.00 x 1.00 x 0.67 inches (50.80 x 25.40 x 17.02 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			
Agency approvals	UL 60601-1		
Standards	Medical Electrical Equipment	IEC/EN60601-1, 2xMOPP, ANSI/AAMI ES60601-1	
	EMI - Conducted and radiated emission	EMI class B for class II configuration	

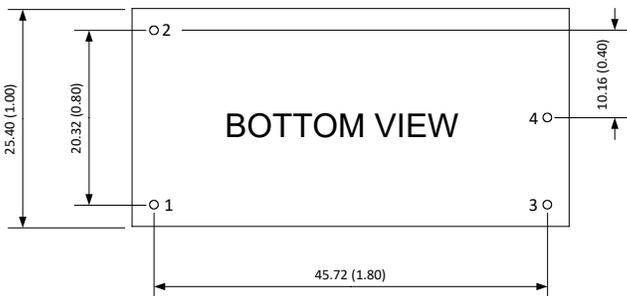
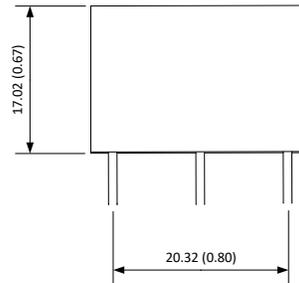
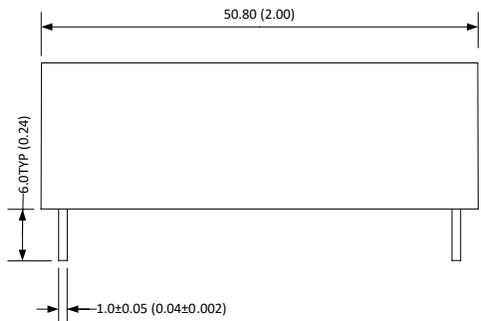
## Derating



## Circuit Schematic



## Dimensions



Unit: mm (inch) Unless otherwise specified, all tolerances are in  $\pm 0.50$

Pin Out Specifications	
Pin	Single output
1	ACN
2	ACL
3	-Vo
4	+Vo

**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 than 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).