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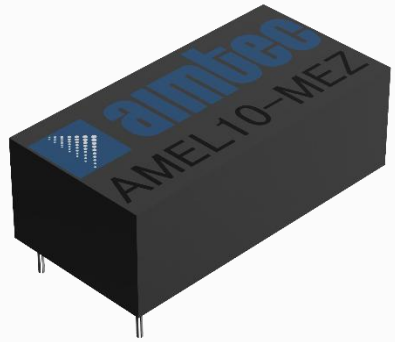
AMEL10-MEZ



2 X 1”

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.

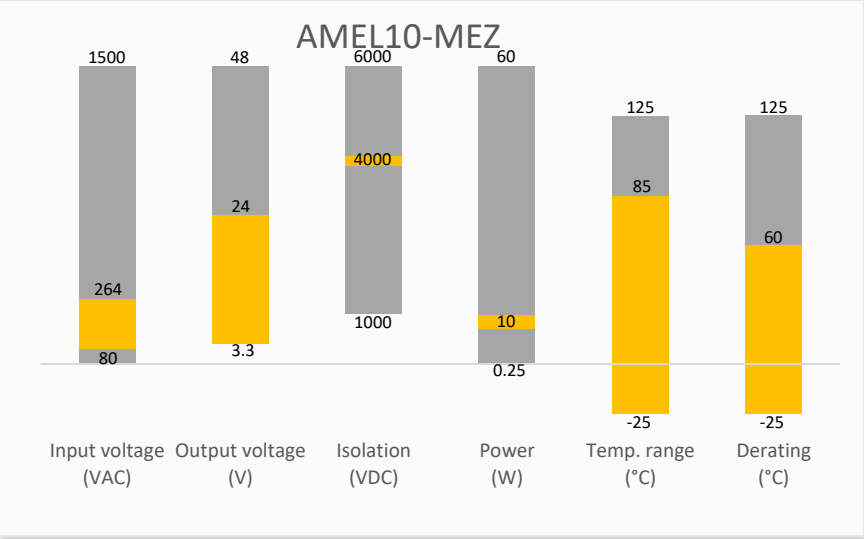
The AMEL10-MEZ is suitable for many applications such as industrial systems, portable equipment, and medical equipment.

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

RoHS · 3yr Warranty · CE · c UL us

Summary



Training

Product Training Video (click to open)

Press Release

Coming Soon!

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	Vo, Io nom		100~240		VAC
Line Frequency	Vi nom, Io nom	47	50/60	63	Hz
Inrush Current	Io nom, Vi:115VAC			25	A
	Io nom, Vi:230VAC			45	A
Input Current	115VAC, Ful 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 ≤ 5mA		4000		VAC
Resistance	Input / Output, @500VDC	100			MΩ

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	5V output model	±3		%
	Others	±2		%
Line regulation	Full load	±0.3		%
Load regulation	0 to 100% load	±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 Vin	0		%

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

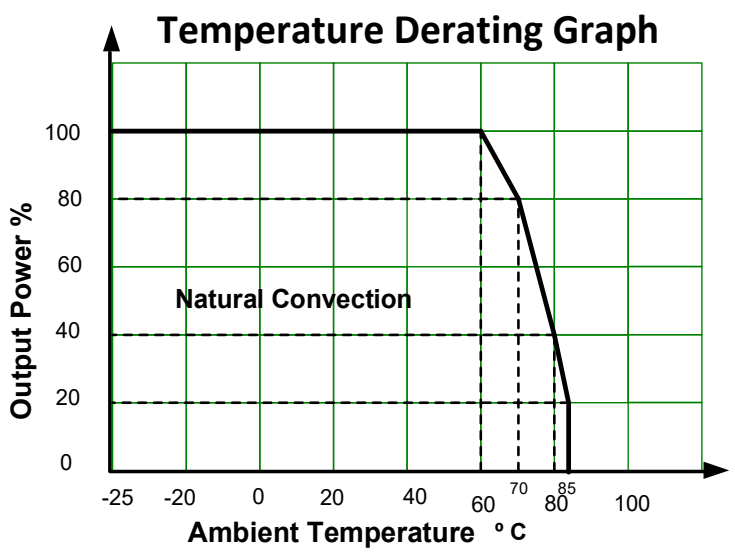
General Specifications

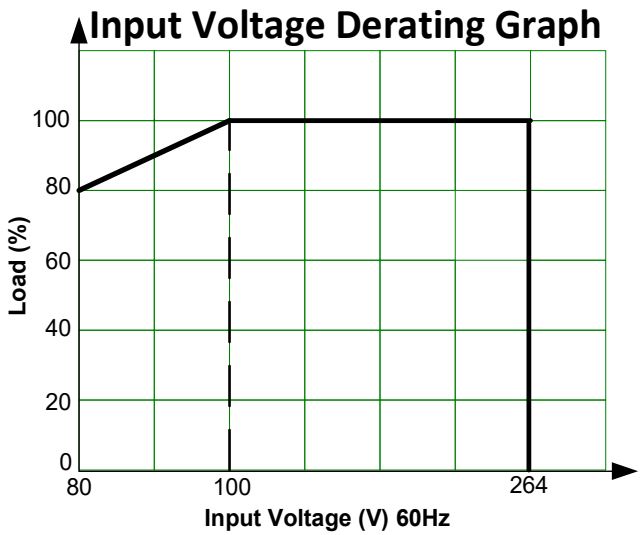
Parameters	Conditions	Typical	Maximum	Units
Protection class	Class II			
Overload protection	Auto recovery	≥ 110		% of Iout
Over voltage protection	Zener diode clamp	≥ 110	150	% of Vout
Short circuit protection	Hiccup, Continuous, Auto recovery			
Over temperature protection	Shut-down, Auto-recovery			
Operating temperature	See derating graph	-25 to +85		°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.				

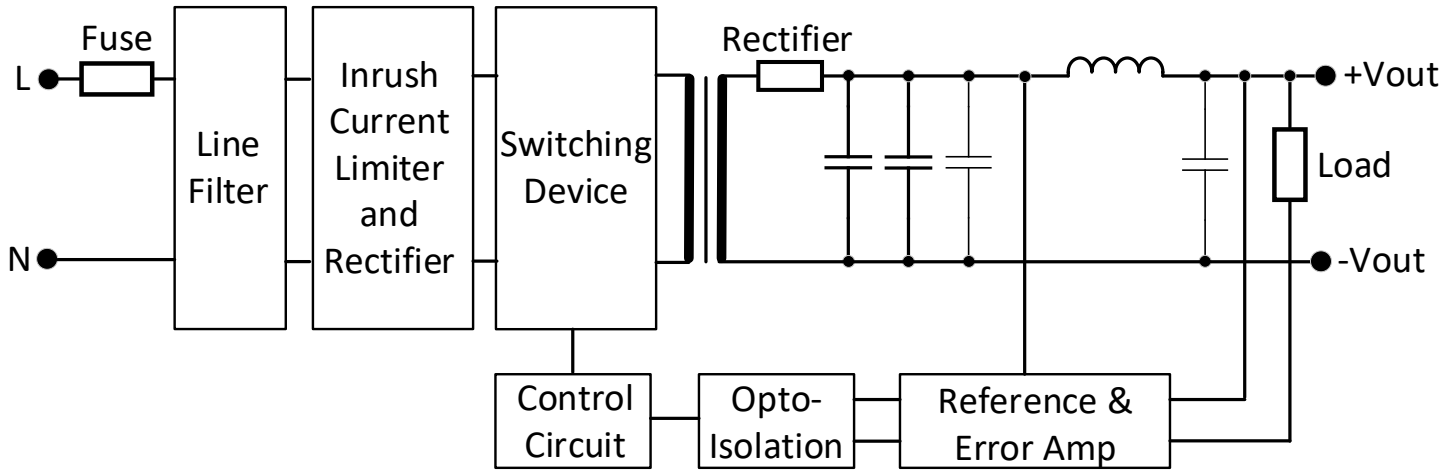
Safety Specifications		
Agency approvals	UL 60601-1	
Standards	Medical Electrical Equipment	IEC/EN60601-1, 2xMOPP, ANSI/AAMI ES60601-1
	EMI - Conducted and radiated emission	EMI class B for class Ⅱ configuration

Derating

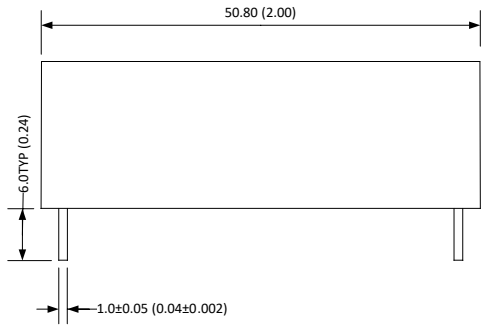


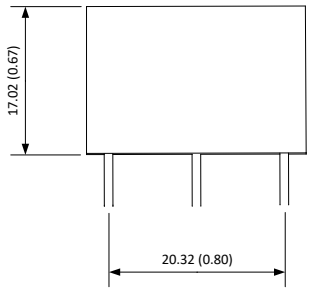


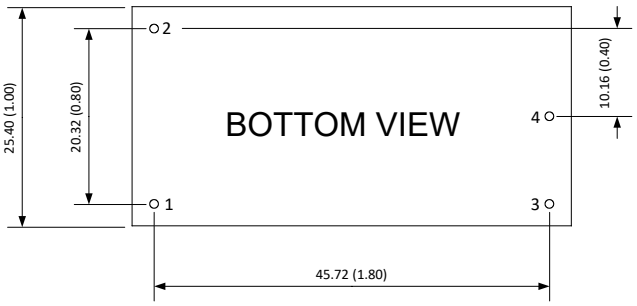
Circuit Schematic



Dimensions







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

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

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