

Series AMEC15-MAZ

15 Watt | AC-DC / DC-DC Converter

FEATURES:



- Connector on Input & Output
- Operating temperature: -40 to +80°C
- Over load, Over Voltage, Short Circuit Protection
- Optional DIN Rail mounting bracket
- Universal input: 90-264VAC, 47-440Hz
- RoHS compliant
- Soft start
- Energy Star compliant
- CE, cULus, CB approvals
- 4000VAC I/O Isolation



Models Single output

Model	Input Voltage (VAC/Hz)	Input voltage (VDC)	Output Voltage (V)	Output Current max (A)	Maximum Capacitive Load (μF)	Efficiency (%)
AMEC15-3.3SMAZ	90-264/47-440	120-370	3.3	3	4700	74
AMEC15-5SMAZ	90-264/47-440	120-370	5	3	2200	78
AMEC15-12SMAZ	90-264/47-440	120-370	12	1.25	1000	81
AMEC15-15SMAZ	90-264/47-440	120-370	15	1	680	81
AMEC15-24SMAZ	90-264/47-440	120-370	24	0.63	470	83

Models Dual output

Model	Input Voltage (VAC/Hz)	Input voltage (VDC)	Output Voltage (V)	Output Current max (A)	Maximum Capacitive Load (μF)	Efficiency (%)
AMEC15-5DMAZ	90-264/47-440	120-370	±5	±1.5	±1000*	78
AMEC15-12DMAZ	90-264/47-440	120-370	±12	±0.63	±470*	80
AMEC15-15DMAZ	90-264/47-440	120-370	±15	±0.5	±330*	81

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Current	115VAC		350	mA
	230VAC		180	mA
Inrush current <2ms	115 VAC		10	A
	230 VAC		20	A
Leakage current	115 VAC		0.1	mA
	264 VAC		0.2	mA
External Fuse (recommend)	slow blow type	2		A
Input Dissipation	No load	<0.5		W
Under Voltage Protection		88		VAC

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±2		%
Line regulation	LL-HL	±0.5		%
Load regulation (single output)	0-100%	±0.5		%
Cross regulation (dual output)	25% load - 1 st out, 100% load - 2 nd out	±5		%
Transient Recovery Time		200		μs
Transient Recovery Deviation	25% load step	±2		% of Vout
Ripple & Noise*	20MHz bandwidth	100		mVp-p
Hold-up time	min	20		ms

*Ripple & Noise measured with 1μF M/C and 47μF E/C

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	3sec		4000	VAC
Isolation resistance		>1000		MΩ

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency		132		KHz
Start up time		900		mS
Over load protection	Auto recovery, hiccup mode	>131		%
Over voltage protection		Zener diode clamp		
Short Circuit protection		Continuous		
Short Circuit restart		Auto recovery		
Operating temperature	With derating over 55 °C (10CFM)	-40 to +80		°C
Storage temperature		-40 to +100		°C
Max Case temperature			100	°C
Temperature coefficient		±0.02		% / °C
Cooling		Free air convection		
Humidity			95	% RH
Weight		100		g
Dimensions (L x W x H)		3.62 x 2.56 x 0.94 inches	92.0 x 65.0 x 24.0 mm	
MTBF		> 400 000hrs (MIL-HDBK -217F, t _a =+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.

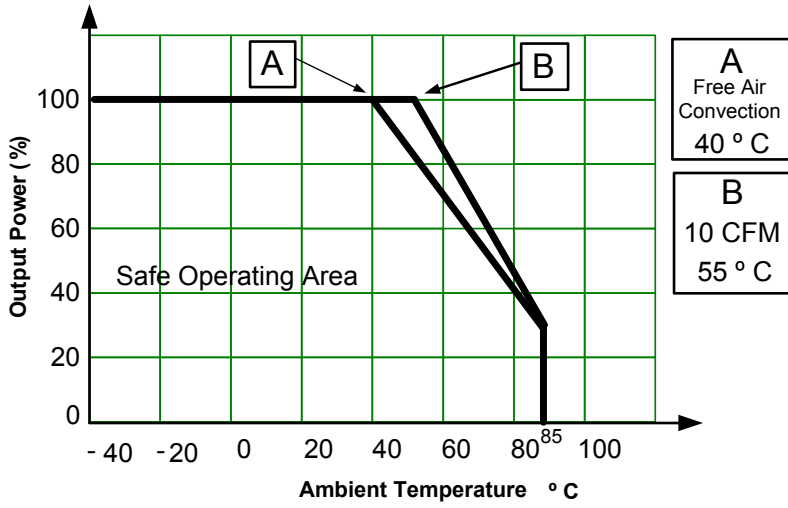
Environment Approval

Parameters	Conditions
Shock	Wave form: Half sine wave
	Acceleration amplitude: 5gn
	Bump duration: 30 ms
	Number of bumps: 18 (3 in each direction for every axis)
	Converter operation before and after test, body mounted (on chassis)
Vibrations	Test mode: Sweep sine
	10-100Hz, speed 0.05Hz/s
	Displacement: 1mm
	Acceleration: 3g
	3 loops 30min one cycle, 3h total, every axis tested Converter operation before and after test, body mounted (on chassis)

Safety & EMC Specifications

Parameters		
Agency approvals	cULus, CE, CB	
Standards	Medical Electrical Equipment	IEC\EN\UL 60601-1, CSA-C22.2 No. 601.1-M90
	Information technology Equipment	EN 60950-1:2006+A11:2009
	Harmonic Current Emissions	IEC/EN 61000-3-2, (EN60555-2)
	EMI - Conducted and radiated emission	EN55011, class B
	Voltage fluctuations and flicker	IEC/EN 61000-3-3, (EN60555-3)
	Electrostatic Discharge Immunity	IEC 61000-4-2
	RF, Electromagnetic Field Immunity	IEC 61000-4-3
	Electrical Fast Transient/Burst Immunity	IEC 61000-4-4
	Surge Immunity	IEC 61000-4-5
	RF, Conducted Disturbance Immunity	IEC 61000-4-6
	Power frequency Magnetic Field Immunity	IEC 61000-4-8
Voltage dips, Short Interruptions Immunity	IEC 61000-4-11	

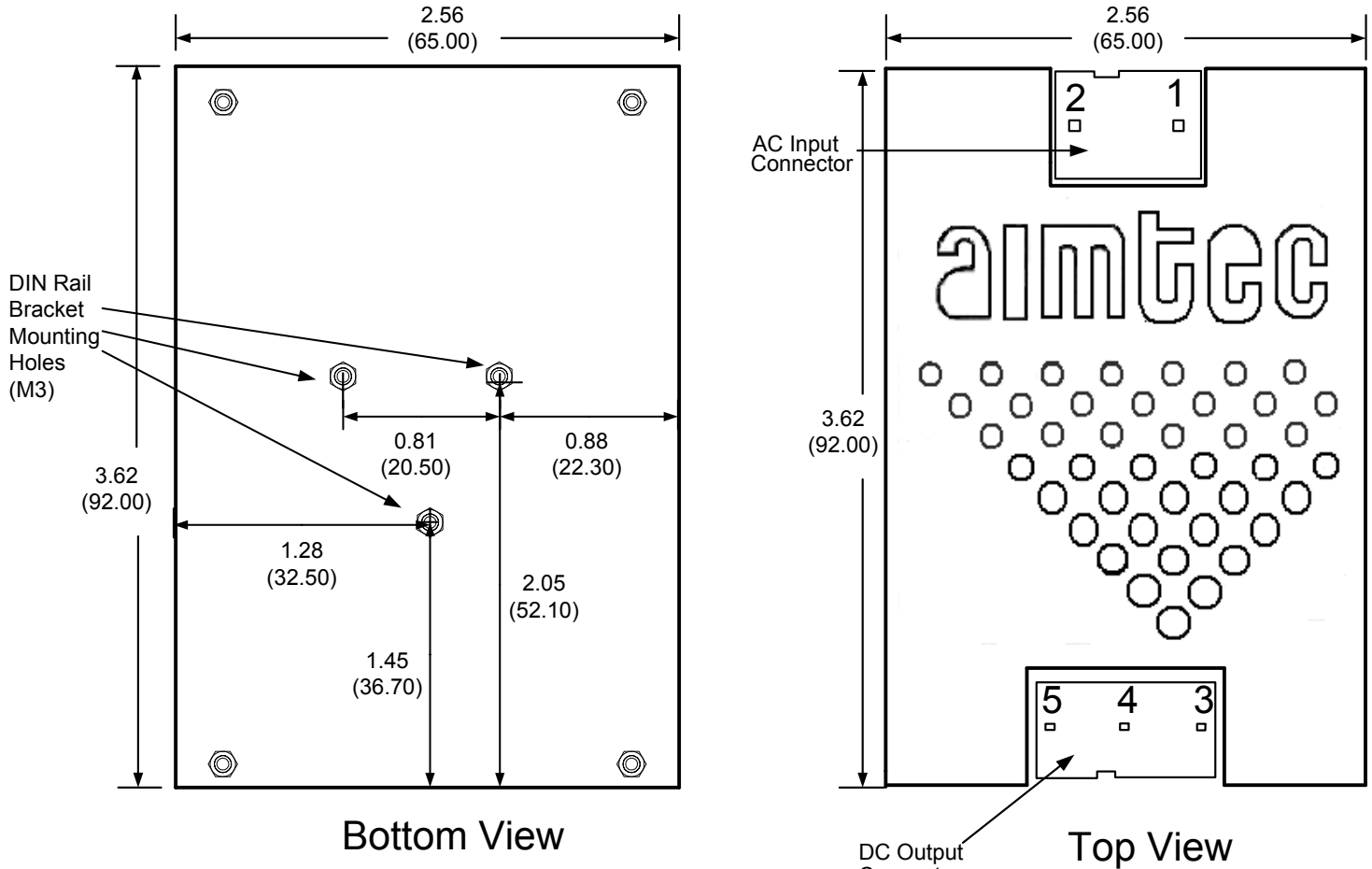
Derating



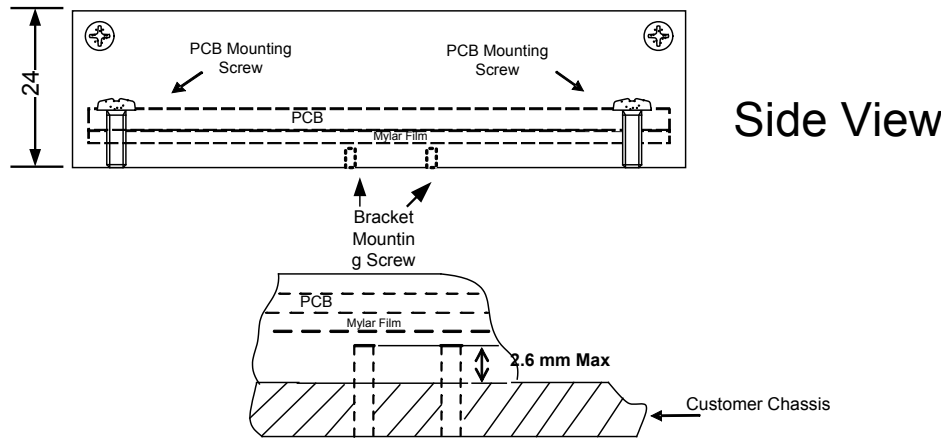
Pin Out Specifications

Pin	Single	Dual
1	AC Input (N)	AC Input (N)
2	AC Input (L)	AC Input (L)
3	-V Output	-V Output
4	No Connection	Common
5	+V Output	+V Output

Dimensions

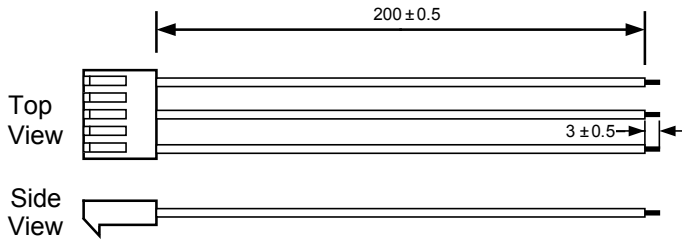


Dimensions: inch (mm)
Case Tolerance: ±0.05 (±1.30)

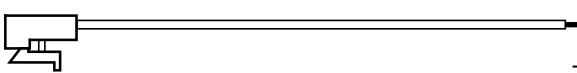


Mating Connectors with Wire (included)

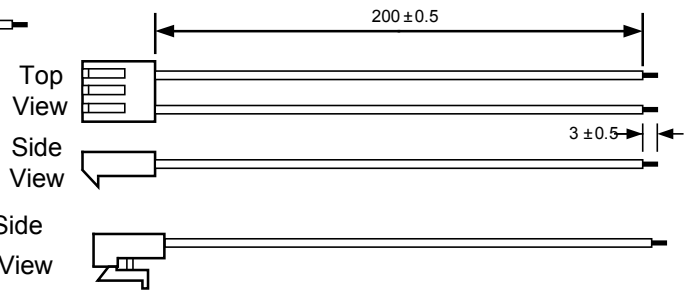
DC Output Mating Connector



Alternative Connector Side View

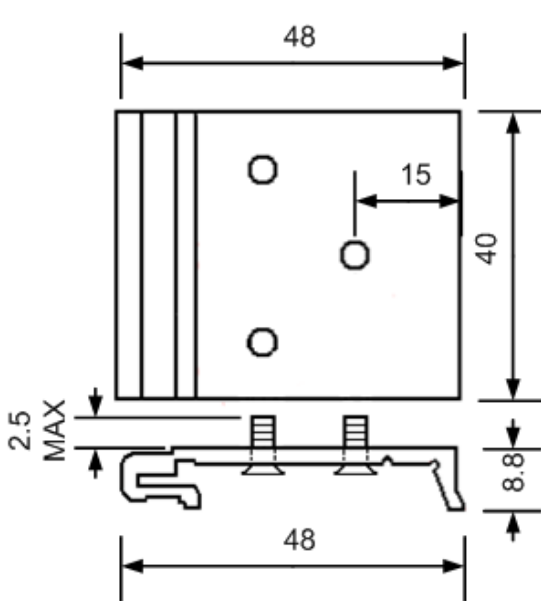


AC Input Mating Connector

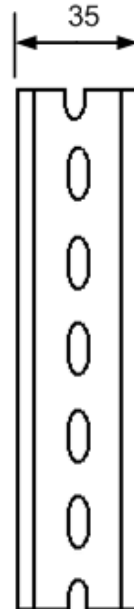


Alternative Connector Side View

Optional DIN Rail Bracket



To order optional DIN rail bracket kit specify part number DRB01 when placing order



Aimtec DRB01 bracket is compatible with standard 35mm DIN rails (TS35/7.5)

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