

AMC25 Series

25 Watts

- 90-305VAC Input, 47-440Hz
- IEC 62368-1 ITE approval & designed to meet IEC 60335-1 Home Appliance
- Encapsulated PCB mount
- -40 to +70°C Operation
- EN55032 Level B conducted & radiated
- 5 Year warranty



Dimensions:

2.07 x 1.08 x 0.93" (52.5 x 27.5 x 23.5mm)

The AMC25 series of compact encapsulated AC-DC power modules are PCB mount and have low emissions, meeting EN55032 level B for both conducted and radiated noise. The units are suitable for home designed to meet IEC 60335-1, also they are approved to the latest IEC 62368-1 safety standard. They provide 20-25W of power and have a wide temperature range from -40 to +70°C. The series offers low no-load power consumption of <0.1W and outputs are available from 5.1 to 24V. All models have a FiDUS 5 Year warranty.

Models & Ratings

Model Number	Output Power	Output voltage	Output Current	Efficiency	Capacitive Load	Ripple / Noise ⁽¹⁾
AMC2505	20W	5.1V	3.922A	84%	2000uF	<120mV
AMC2512	25W	12V	2.083A	88%	680uF	<150mV
AMC2515	25W	15V	1.666A	88%	220uF	<160mV
AMC2524	25W	24V	1.042A	87%	220uF	<240mV

Notes

1. Ripple and noise measured with 20MHz bandwidth and with 0.1uF and 47uF parallel capacitors

Key specifications

Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
AC Input range	90		305	VAC	Derate at 100VAC to 80% at 90VAC
Operating temperature	-40		70	°C	Derate linearly from 100% power at 50°C to 50% power at 70°C. 80% power max at -40°C, full power from -30°C. See derating curve
Efficiency	84		88	%	See model table above. At 230VAC full load
Dimensions	2.07 x 1.08 x 0.93" (52.5 x 27.5 x 23.5mm)				
EMC	EN55032 Level B Conducted and Radiated. EN61000-3 and EN61000-4, harmonics, flicker, Surge, EFT, ESD, conducted and radiated.				
Safety	UL / IEC / EN 62368-1, Designed to meet IEC / EN 60335-1, CE				

Input

Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Input voltage	90		305	VAC	Derate at 100VAC to 80% at 90VAC
	120		430	VDC	DC fuse required
Input frequency	47		440	Hz	
Power factor					EN61000-3-2 class A compliant
Input current	320		490	mA rms	490mA 115VAC and 320mA at 230VAC
Inrush current	30		60	A	30A at 115 and 60A at 230VAC. Cold start at 25°C
No load input power			0.1	W	
Earth leakage current					Class II construction, no earth

Output

Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Output voltage	5.1		24	VDC	See Model & Ratings table
Set point accuracy			±2	%	
Line regulation		±1		%	Low line to High line.
Load regulation	±2		±3	%	5 to 100% load. ±3% for 5.1V ±2% for all others
Minimum load	0			%	
Ripple & Noise	120		240	mV pk-pk	See model table. Noise and ripple measured with 0.1uF ceramic and 47uF electrolytic. 20 MHz bandwidth.
Hold up time		36		mS	At 230VAC. Full load
Overload protection					Trip & restart. Automatic recovery
Short circuit protection					Trip & restart. Automatic recovery
Overvoltage protection					Latch reset

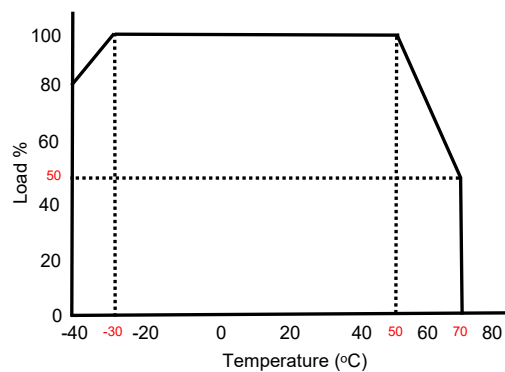
General

Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Efficiency	84		88	%	See models & Ratings table. At 230VAC full load
Isolation	4000			VAC	Input to output
Power density			12.02	W/In ³	
MTBF		>400		KHrs	As per MIL-HDBK-217F, 25°C GB
Weight		55		g	

Environmental

Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating temperature	-40		70	°C	Derate linearly from 100% power at 50°C to 50% power at 70°C. 80% power max at -40°C, full power from -30°C. See derating curve
Storage temperature	-40		85	°C	
Cooling					Convection cooled
Temperature coefficient			±0.05	%/°C	
Humidity			95	% RH	

Derating curve



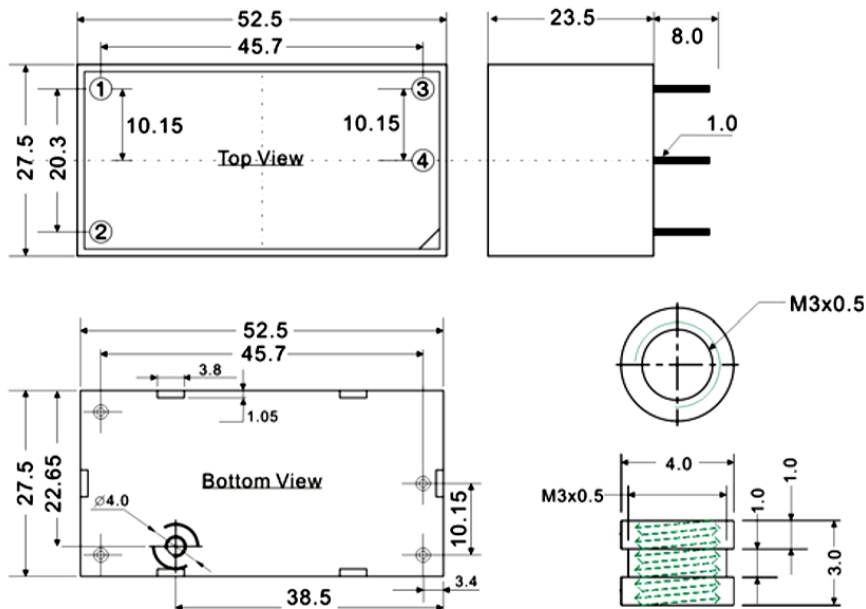
EMC: Emissions

	Standard	Test level	Criteria	Notes & Conditions
Conducted	EN55032	B		
Radiated	EN55032	B		
Harmonic current	EN61000-3-2	Class A		
Voltage flicker	EN61000-3-3			

Safety Approvals

	Safety standard	Notes & Conditions
UL	UL 62368-1	
CB	IEC 62368-1, Designed to meet IEC 60335-1	
TUV	EN 62368-1, Designed to meet EN 60335-1	
CE		2014/35/EU Low voltage directive
Equipment protection class		Class II

Mechanical Details



Pin Connections	
Pin	Function
1	AC IN (L)
2	AC IN (N)
3	+DC OUT
4	-DC OUT

Dimension notes

- All dimensions shown in millimetres
- Pin diameter 0.5 ± 0.05 (0.02 ± 0.002)
- Case tolerance ± 0.5 (± 0.002)