

AMK25 Series

25 Watts

- Ultra compact 25W in 2.07 x 1.08 footprint
- IT and home use certifications IEC/EN60950-1 and IEC/EN60335-1
- 90-264VAC Universal input
- Single output 5 to 24V
- -40 to +70°C Operation
- <0.1W No load input power
- 5 Year warranty



The AMK25 series of ultra compact, encapsulated AC-DC power modules are PCB mount and have low emissions, meeting EN55032 level B for both conducted and radiated noise. 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 to 24V. The AMK25 has the latest approvals for IT EN60950-1 and home use EN60335-1. All models have a FIDUS 5 year warranty.

Dimensions:

2.07 x 1.08 x 0.93" (52.58 x 27.43 x 23.62mm)

Models & Ratings

Model Number	Output Power	Output voltage	Output Current	Efficiency	Noise	Capacitive load
AMK2505	20W	5.1V	3.922A	82%	120mV	2000uF
AMK2512	25W	12V	2.083A	86%	150mV	680uF
AMK2515	25W	15V	1.666A	85%	160mV	220uF
AMK2524	25W	24V	1.042A	86%	240mV	220uF

Key specifications

Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
AC Input range	90		264	VAC	Derates from 100% at 115VAC to 80% at 90VAC. See derating curve p2. 120-370VAC possible also.
Operating temperature	-40		70	°C	Derates from 100% at 50°C to 25% at 70°C. See derating curve p3
Efficiency	82		86	%	See model table above
Dimensions	2.07 x 1.08 x 0.93" (52.58 x 27.43 x 23.62mm)				
EMC	EN55032 Level B Conducted and Radiated. EN55024; EN61000-4, Surge, EFT, ESD, conducted and radiated.				
Safety	UL/cUL60950-1, IEC/EN60950-1, IEC/EN 60335-1 & CE				

Input

Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Input voltage	90		264	VAC	Derates from 100% at 115VAC to 80% at 90VAC. See derating curve p2. 120-370VAC possible also.
	120		370	VDC	
Input frequency		47-440		Hz	
Input current		490/320		mA rms	At 115VAC/230VAC
Inrush current		30/60		A	115/230VAC cold start at 25°C
No load input power			0.1	W	
Input protection	3.15A Slow blow fuse required				

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	±1		±3	%	5 to 100%. 3% for 5.1V model
Minimum load	0			%	
Ripple & Noise	See model table page 1				All models measured with 0.1uF ceramic and 47uF electrolytic. 20 MHz bandwidth.
Hold up time		36		mS	Min. at 230VAC. Full load
Overload protection	105		180		Hiccup Auto-recovery
Short circuit protection					Trip & restart. Automatic recovery (hiccup)
Overvoltage protection	110		140		Shutdown and latch off, AC recycle

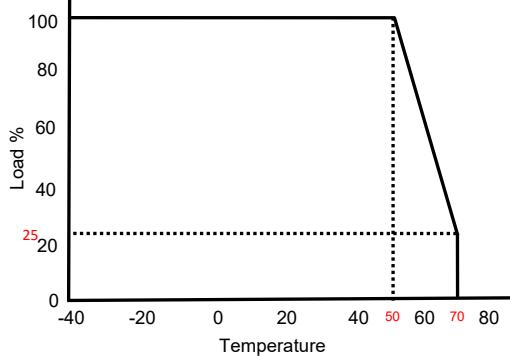
General

Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Efficiency	82		86	%	See models & Ratings table
Isolation	3000			VAC	Input to output
Power density			12.08	W/In ³	
MTBF		>400		KHrs	As per MIL-HDBK-217F, 25°C GB
Weight		62		g	

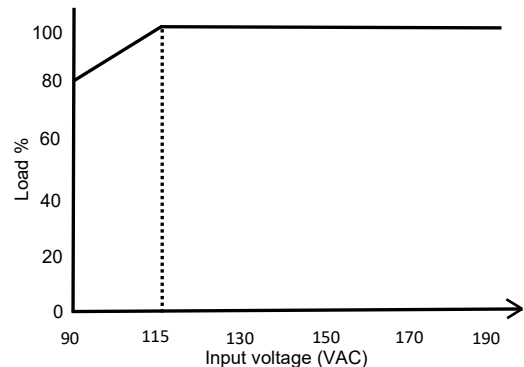
Environmental

Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating temperature	-40		70	°C	Derates from 100% at 115VAC to 80% at 90VAC. See derating curve below
Storage temperature	-40		85	°C	
Cooling					Convection cooled
Temperature coefficient			±0.05	%/°C	
Humidity			95	% RH	

Derating curve



Derating curve



EMC: Emissions

	Standard	Test level	Criteria	Notes & Conditions
Conducted	EN55032	B		
Radiated	EN55032	B		
Voltage flicker	EN61000-3-3			

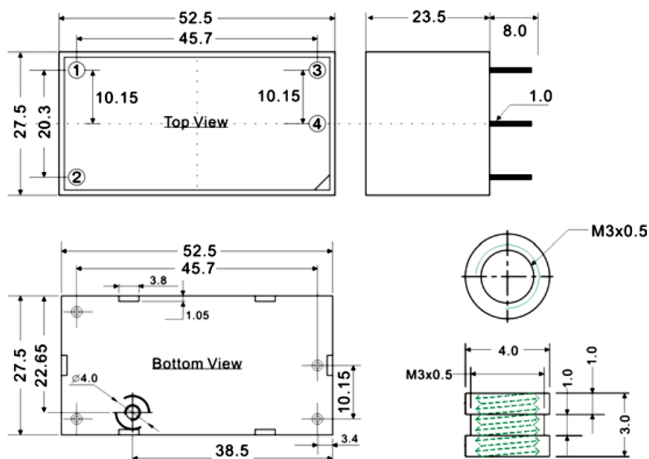
EMC: Immunity

	Standard	Test level	Criteria	Notes & Conditions
ESD	EN61000-4-2	3/4	A	±6kV contact, ±8kV air
Radiated	EN61000-4-3	2	A	3V/m
EFT	EN61000-4-4	3	A	2KV
Surges	EN61000-4-5	Installation Class 3	A	Line to line 1KV, line/neutral to earth 2KV
Conducted	EN61000-4-6	2	A	3Vrms
Magnetic Fields	EN61000-4-8	1	A	1A/m
Voltage dips and interruptions	EN61000-4-11			>95% 0.5 cycles, 30% 25 cycles, >95% 250 cycles: AAC

Safety Approvals

	Safety standard	Notes & Conditions
UL/cUL	UL60950-1, CSA 22.2 No 234 as per cUL	
European	EN60950-1, EN60335-1	
Other	IEC60950-1, IEC60335-1	
CE		2011/85/EU RoHS Directive and 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)