

AMCV60 Series

60 Watts

- Overvoltage Category III
- IEC 62368-1 ITE approval & designed to meet IEC 60335-1 Home Appliance
- 90-305VAC Operation
- -40 to +85°C Operation
- 3 Year warranty



Dimensions:

2.92 x 1.85 x 0.91" (74.2 x 47 x 23.1mm)

The AMCV60 series of OVC III robust 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 appliances designed to meet EN 60335-1, also they are approved to the latest EN 62368-1 safety standard. They provide 60W of power and have a wide temperature range from -40 to +85°C. The series offers low no-load power consumption of <0.1W and outputs are available from 12 to 24V. All models have a Fidus 3 Year warranty.

Models & Ratings

Model Number	Output Power	Output voltage	Output Current	Efficiency	Capacitive Load	Ripple / Noise ⁽¹⁾
AMCV6012S	60W	12V	5A	90%	6000uF	<120mV
AMCV6015S	60W	15V	4A	90%	4000uF	<150mV
AMCV6024S	60W	24V	2.5A	90%	2500uF	<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		85	°C	For derating curve see page 2
Efficiency		90		%	See model table above. At 230VAC full load
Dimensions	2.92 x 1.85 x 0.91" (74.2 x 47 x 23.1mm)				
EMC	EN55032 Level B Conducted and Radiated. EN61000-3 and EN61000-4, harmonics, flicker, Surge, EFT, ESD, conducted and radiated. EN55035.				
Safety	UL / IEC / EN 62368-1. Designed to meet IEC / EN 60335-1, EN 61558-1, EN61558--2-16. 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		63	Hz	
Power factor					EN61000-3-2 class A compliant
Input current	1000		1500	mA rms	1500mA 115VAC and 1000mA at 230VAC
Inrush current	45		90	A	45A at 115 and 90A 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	12		24	VDC	See Model & Ratings table
Set point accuracy			±2	%	
Line regulation		±0.5		%	Low line to High line.
Load regulation		±1		%	0 to 100% load.
Minimum load	0			%	
Ripple & Noise	120	150	240	mV pk-pk	See model table. Noise and ripple measured with 0.1uF ceramic and 47uF electrolytic. 20 MHz bandwidth.
Hold up time	30			mS	At 230VAC. Full load
Overload protection					Trip & restart. Automatic recovery
Short circuit protection					Trip & restart. Automatic recovery
Overvoltage protection					Latch reset

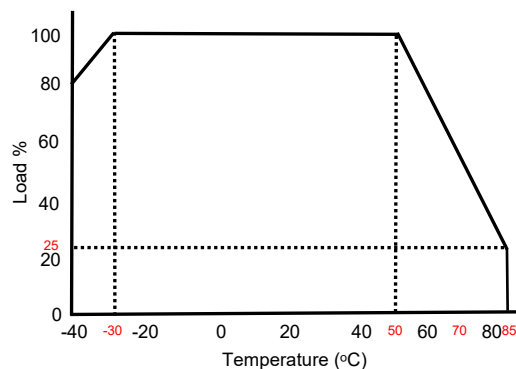
General

Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Efficiency		90		%	See models & Ratings table. At 230VAC full load
Isolation	4200			VAC	Input to output
Power density			12.21	W/In ³	
MTBF		>300		kHrs	As per MIL-HDBK-217F, 25°C GB
Weight		158		g	

Environmental

Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating temperature	-40		85	°C	See derating curve below
Storage temperature	-40		85	°C	
Cooling					Convection cooled
Temperature coefficient			±0.05	%/°C	
Humidity			95	% RH	

Derating curve



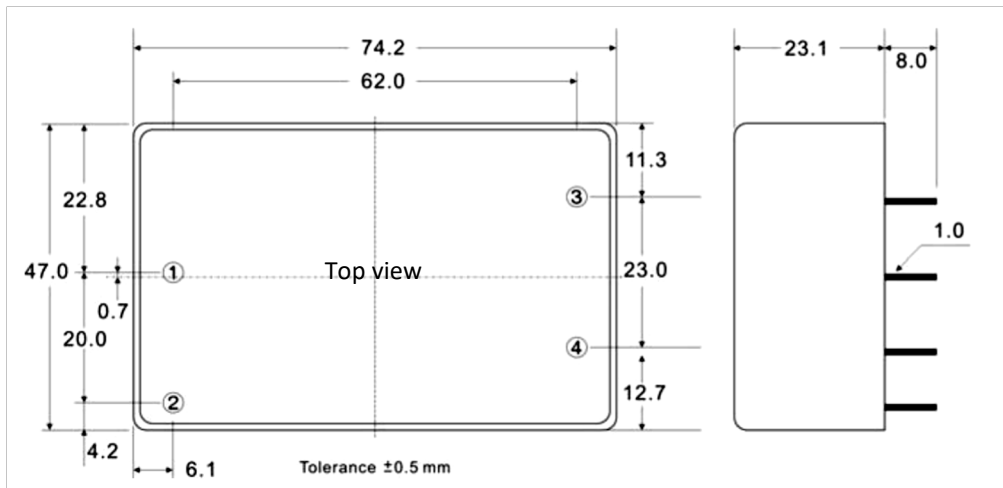
EMC: Emissions

	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	Pending
CB	IEC 62368-1, Designed to meet IEC 60335-1	
TUV	EN 62368-1, Designed to meet EN 60335-1 EN61558-1 EN61558-2-16	
CE		2014/35/EU LVD (including UKCA)
Equipment protection class		Class II

Mechanical Details



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

Dimension notes

- All dimensions shown in millimetres