

# AME05 Series



## 5 watt encapsulated ac-dc converter

- SWITCHING POWER MODULES FOR PCB MOUNTING
- FULLY ENCAPSULATED PLASTIC CASE
- UNIVERSAL INPUT RANGE 90 ... 260 VAC, 47 ... 440 Hz
- REGULATED OUTPUT
- LOW RIPPLE & NOISE
- HIGH EFFICIENCY
- CE, cUL APPROVALS

### ELECTRICAL SPECIFICATIONS



All specifications valid at nominal Input voltage, full load and +25°C after warm-up time unless otherwise stated.

Model No. (Single Output)		AME05-3.3S	AME05-5S	AME05-12S	AME05-15S	AME05-24S
Max output wattage (W)		5W	5W	5W	5W	5W
Input	Voltage	90 ... 260 VAC or 120 ... 370 VDC				
	Frequency (Hz)	47 ... 440 Hz				
	Current (Full Load)	110mA max. (115 VAC) / 70mA max. (230 VAC)				
	Inrush Current (<2ms)	10 A max. (115 VAC) / 20 A max. (230VAC)				
	Leakage Current	0.75mA max.				
	External Fuse (recommended)	1.5 A slow blow type				
Output	Voltage (VDC)	3.3V	5V	12V	15V	24V
	Voltage Accuracy	±2%				
	Current (mA) max.	1500	1000	416	333	200
	Line Regulation (typ.)	±0.3%				
	Load Regulation (typ.)	±0.5%				
	Minimum Load	4%	1%	1%	0%	0%
	Maximum Capacitive Load	470-23,000m F depending on model				
	Noise	<0.5% Vout +50mV max (Vp-p)				
	Ripple	<0.2% Vout +40mV max (Vp-p)				
	Efficiency	68%	72%	75%	75%	76%
	Hold-up Time	15 ms min.				
	Switching Frequency	100 kHz				
Protection	Over Current Protection	Hiccup technique, auto-recovery				
	Over Voltage Protection	Zener diode clamp				
	Short Circuit Protection	Hiccup mode, indefinite (automatic recovery)				
Isolation	Input-Output (VAC)	3000V				
	Input-FG (VAC)	1500V				
	Output-FG (VAC)	500V				
Environment	Operating Temperature	-25°C ... +71°C				
	Storage Temperature	-40°C ... +85°C				
	Temperature Coefficient	0.02% / °C				
	Humidity	95% RH				
	MTBF	>290,000 h @ 25°C (MIL-HDBK-217F)				
Physical	Dimension (L x W x H)	2.17 x 1.77 x 0.81 inches (55.0 x 45.0 x 20.5 mm)				
	Case Material	Plastic resin + Fiberglass (flammability to UL 94V-0)				
	Weight	80g				
	Cooling Method	Free air convection				
Safety	Agency Approvals	cUL, CE				
EMC	EMI (Conducted & Radiated Emission)	EN 55022 class B				
	EMS (Noise Immunity)	EN 50082-1				

Specifications are subject to change without notification

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## 5 watt encapsulated ac-dc converter

### ELECTRICAL SPECIFICATIONS

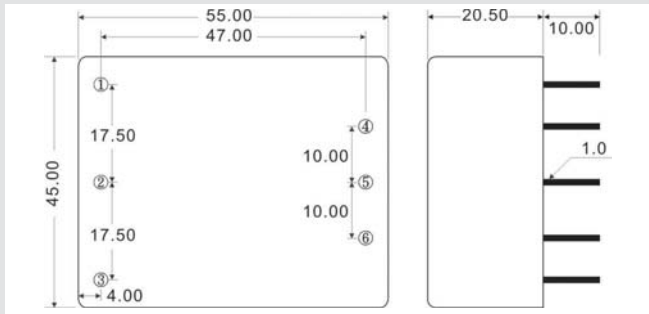
All specifications valid at nominal Input voltage, full load and +25°C after warm-up time unless otherwise stated.

Model No. (Dual Output)		AME05-5D	AME05-12D	AME05-15D
Max output wattage (W)		5W	5W	5W
Input	Voltage	90 ... 260 VAC or 120 ... 370 VDC		
	Frequency (Hz)	47 ... 440 Hz		
	Current (Full Load)	110mA max. (115 VAC) / 70mA max. (230 VAC)		
	Inrush Current (<2ms)	10 A max. (115 VAC) / 20 A max. (230VAC)		
	Leakage Current	0.75mA max.		
	External Fuse (recommended)	1.5 A slow blow type		
Output	Voltage (VDC)	±5V	±12V	±15V
	Voltage Accuracy	±2%		
	Current (mA) max.	±500	±200	±160
	Line Regulation (typ.)	±0.3%		
	Load Regulation (typ.)	±0.5%		
	Minimum Load	0%	0%	3%
	Maximum Capacitive Load	470-23,000m F depending on model		
	Noise	<0.5% Vout +50mV max (Vp-p)		
	Ripple	<0.2% Vout +40mV max (Vp-p)		
	Efficiency	72%	75%	75%
	Hold-up Time	15 ms min.		
	Switching Frequency	100 kHz		
Protection	Over Current Protection	Hiccup technique, auto-recovery		
	Over Voltage Protection	Zener diode clamp		
	Short Circuit Protection	Hiccup mode, indefinite (automatic recovery)		
Isolation	Input-Output (VAC)	3000V		
	Input-FG (VAC)	1500V		
	Output-FG (VAC)	500V		
Environment	Operating Temperature	-25°C ... +71°C		
	Storage Temperature	-40°C ... +85°C		
	Temperature Coefficient	0.02% / °C		
	Humidity	95% RH		
	MTBF	>290,000 h @ 25°C (MIL-HDBK-217F)		
Physical	Dimension (L x W x H)	2.17 x 1.77 x 0.81 inches (55.0 x 45.0 x 20.5 mm)		
	Case Material	Plastic resin + Fiberglass (flammability to UL 94V-0)		
	Weight	80g		
	Cooling Method	Free air convection		
Safety	Agency Approvals	cUL, CE		
EMC	EMI (Conducted & Radiated Emission)	EN 55022 class B		
	EMS (Noise Immunity)	EN 50082-1		

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## OUTLINE DIMENSIONS & PIN CONNECTIONS

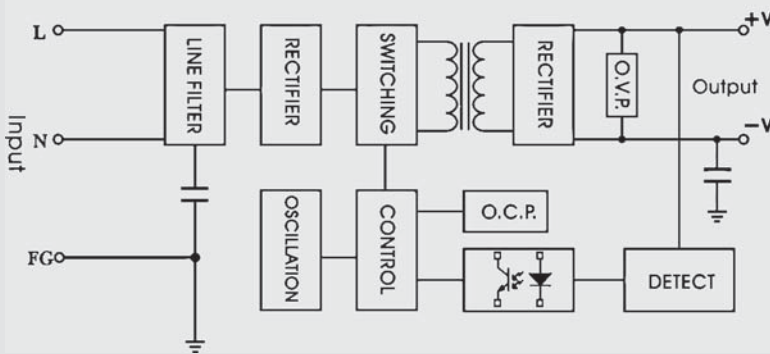
### MECHANICAL DIMENSION (Top View)



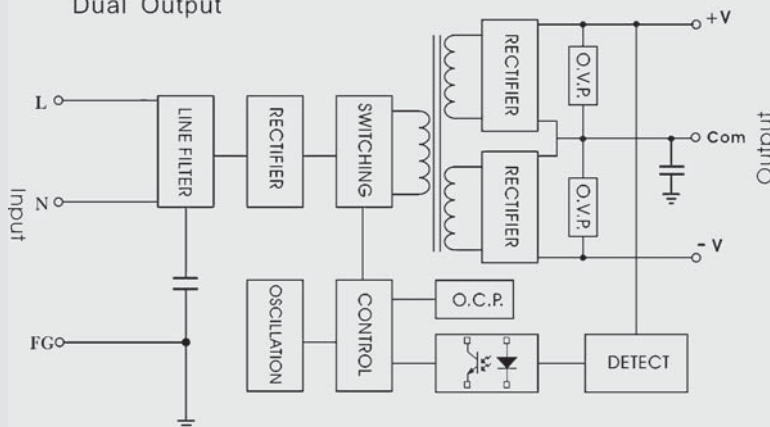
Pin	Single	Dual
1	FG	FG
2	AC Input (N)	AC Input (N)
3	AC Input (L)	AC Input (L)
4	-DC Output	-DC Output
5	Do not connect	Common
6	+DC Output	+DC Output

### BLOCK DIAGRAM

#### Single Output



#### Dual Output



### DERATING

