

# AME30 Series



## 30 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)	AME30-3.3S	AME30-5S	AME30-12S	AME30-15S	AME30-24S	
<b>Max output wattage (W)</b>	<b>20W</b>	<b>30W</b>	<b>30W</b>	<b>30W</b>	<b>30W</b>	
Input	Voltage 90 ... 260 VAC or 120 ... 370 VDC					
	Frequency (Hz) 47 ... 440 Hz					
	Current (Full Load) 520mA max. (115 VAC) / 320mA 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.	6000	6000	2500	2000	1250
	Line Regulation (typ.)	±1%				
	Load Regulation (typ.)	±1%				
	Minimum Load	5%	4%	2%	2%	2%
	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	73%	80%	84%	84%	84%
	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				
Environment	Operating Temperature	-25°C ... +71°C				
	Storage Temperature	-40°C ... +85°C				
	Temperature Coefficient	0.02% / °C				
	Humidity	95% RH				
	MTBF	>190,000 h @ 25°C (MIL-HDBK-217F)				
Physical	Dimension (L x W x H)	3.5 x 2.5 x 0.98 inches (89.0 x 63.5 x 25.0 mm)				
	Case Material	Plastic resin + Fiberglass (flammability to UL 94V-0)				
	Weight	220g				
	Cooling Method	Free air convection				
Safety	Agency Approvals	cUL, CE				
EMC	EMI (Conducted & Radiated Emission)	EN 55022 class B				
	EMS (Noise Immunity)	EN 55024				

Specifications are subject to change without notification

# AME30 Series

## 30 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 & Triple Output)		AME30-5D	AME30-12D	AME30-15D	AME30-5S12S	AME30-512T	AME30-515T
<b>Max output wattage (W)</b>		<b>30W</b>	<b>30W</b>	<b>30W</b>	<b>30W</b>	<b>30W</b>	<b>30W</b>
Input	Voltage	90 ... 260 VAC or 120 ... 370 VDC					
	Frequency (Hz)	47 ... 440 Hz					
	Current (Full Load)	520mA max. (115 VAC) / 320mA 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	5/12V	5/±12V
Voltage Accuracy		±2%					
Current (mA) max.		±3000	±1250	±1000	3000/1250	3000/±630	3000/±500
Line Regulation (typ.)		±1%	±1%	±1%	±1%/±5%	±1%/±5%	±1%/±5%
Load Regulation (typ.)		±3%	±3%	±3%	±3%/±6%	±2%/±6%	±2%/±6%
Minimum Load		2%	3%	1%	20%	20%	20%
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		80%	84%	84%	80%	80%	80%
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					
Environment	Operating Temperature	-25°C ... +71°C					
	Storage Temperature	-40°C ... +85°C					
	Temperature Coefficient	0.02% / °C					
	Humidity	95% RH					
	MTBF	>190,000 h @ 25°C (MIL-HDBK-217F)					
Physical	Dimension (L x W x H)	3.5 x 2.5 x 0.98 inches (89.0 x 63.5 x 25.0 mm)					
	Case Material	Plastic resin + Fiberglass (flammability to UL 94V-0)					
	Weight	220g					
	Cooling Method	Free air convection					
Safety	Agency Approvals	cUL, CE					
EMC	EMI (Conducted & Radiated Emission)	EN 55022 class B					
	EMS (Noise Immunity)	EN 55024					

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Note:

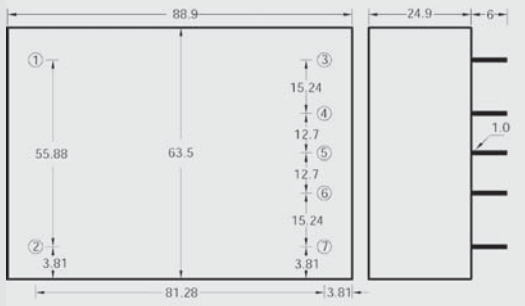
- The triple output required a minimum 20% loading on the output to maintain specified regulation. Operation under no-load condition will not damage these devices, however they may not meet all listed specifications.
- Load regulation for triple output:  
Main output (V1): 20% to 100% with 20% to 100% balanced on auxiliaries.  
Auxiliary outputs (V2 and V3): 20% to 100% balanced on all outputs.
- Cross regulation for triple output:  
Main output 100% load, auxiliary 100%, other auxiliary 25% to 100%.  
Auxiliary outputs (V2 and V3): Main output 100% load, auxiliary 100%, other auxiliary 25% to 100% or main output 25%, auxiliary 25%, other auxiliary 25% to 100%

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## OUTLINE DIMENSIONS & PIN CONNECTIONS

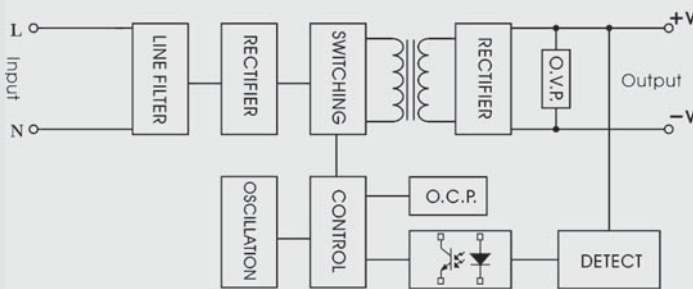
### MECHANICAL DIMENSION (Top View)



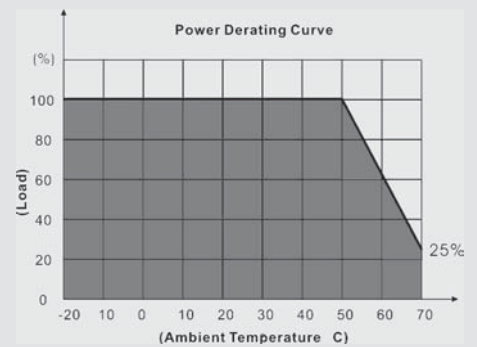
Pin	Single	Dual	5S / 12S	Triple
1	AC Input (N)	AC Input (N)	AC Input (N)	AC Input (N)
2	AC Input (L)	AC Input (L)	AC Input (L)	AC Input (L)
3	+V Output	+V Output	+12V	+V2 Output
4	No pin	No pin	+5V	+5V
5	-V Output	Common	+12 RTN	V2, V3 common
6	No pin	No pin	+5 RTN	+5 RTN
7	No connect	-V Output	No pin	-V3 Output

### BLOCK DIAGRAM

#### Single Output



### DERATING



#### Dual Output

