

# 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
Max output wattage (W)		20W	30W	30W	30W	30W
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

TO ORDER CALL 1-888-9-AIMTEC

# 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	5/±15V
	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					

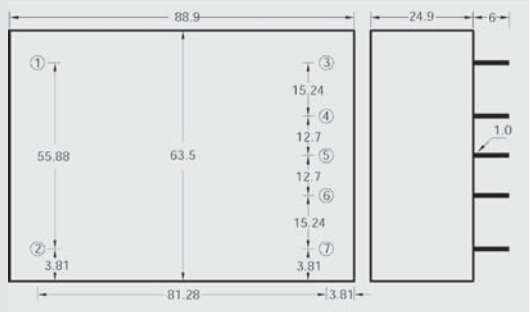
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Note:

- 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%

## OUTLINE DIMENSIONS & PIN CONNECTIONS

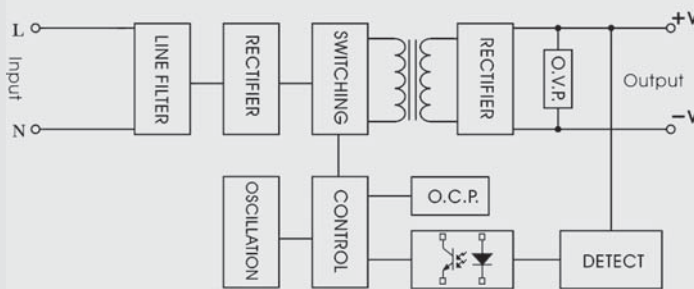
### MECHANICAL DIMENSION (Top View)



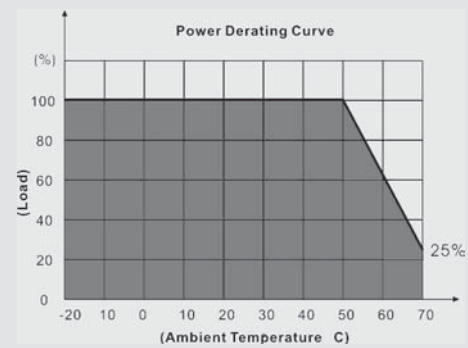
Pin	Single	Dual	5S / 12S	Triple
1	AC Input (N)	AC Input (N)	AC Input (N)	AC Input (N)
2	AC Input (L)	AC Input (L)	AC Input (L)	AC Input (L)
3	+V Output	+V Output	+12V	+V2 Output
4	No pin	No pin	+5V	+5V
5	-V Output	Common	+12 RTN	V2, V3 common
6	No pin	No pin	+5 RTN	+5 RTN
7	No connect	-V Output	No pin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

### BLOCK DIAGRAM

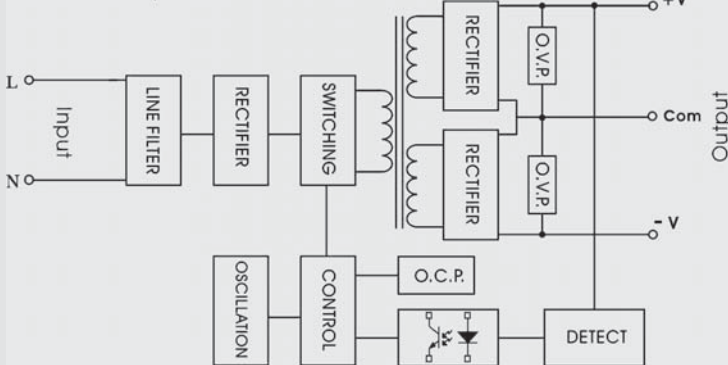
#### Single Output



### DERATING



#### Dual Output



#### Triple Output

