

ARCH AOC AC-DC Power Datasheet

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KEY FEATURES

- Switching Power Module for PCB Mountable
- Fully Encapsulated Plastic Case
- Universal Input Range 90-264VAC, 47-440 Hz
- Single and Dual Output
- Low Ripple and Noise
- Isolation Class II
- Maximum No-Load Watts < 0.3W
- CE, CB and UL Approval
- 3-Years Product Warranty

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ELECTRICAL SPECIFICATIONS

Model No. (Single Output)	AOC-33S	AOC-5S	AOC-8S	AOC-9S	AOC-12S	AOC-14S	AOC-15S	AOC-24S
Max Output Wattage (W)	3.96W	4W	4W	4W	4W	4W	4W	4W
Input	Voltage							
	90-264 VAC or 120-370 VDC							
	Frequency (Hz)							
	47-440 Hz							
	Current (Full load)							
	95 mA max. (115 VAC) / 65 mA max. (230 VAC)							
Inrush Current (<500us)								
15 A max. (115 VAC) / 25 A max. (230 VAC)								
Leakage Current								
0.25 mA max.								
External Fuse (recommend)								
3.15 A slow blow type								
Output	Voltage (V.DC.)							
	3.3V	5V	8V	9V	12V	14V	15V	24V
	Voltage Accuracy							
	±2%							
	Current (mA) max							
	1200	800	500	444	333	286	267	167
	Line Regulation (LL-HL) (typ.)							
	±0.2%							
	Load Regulation (0-100%) (typ.)							
	±1%		±0.5%					
	Minimum Load							
0%								
Maximum Capacitive Load								
14000uF	8000uF	2700uF	2400uF	1000uF	750uF	700uF	220uF	
Ripple & Noise (Vp-p) max								
<250mV	<200mV	<150mV	<100mV					
Efficiency								
68%	72%	74%	75%	76%	76%	76%	77%	
Hold-up Time								
15 ms min.								
Switching Frequency								
132±8 KHz								
Protection	Over Power Protection							
	Hiccup technique, auto-recovery							
	Over Voltage Protection							
Zener diode clamp								
Short Circuit Protection								
Hiccup mode, indefinite (automatic recovery)								
Isolation	Input-Output (V.AC)							
3000V								
Environment	Operating Temperature							
	-40°C...+70°C (with derating)							
	Storage Temperature							
	-40°C...+85°C							
	Temperature Coefficient							
±0.02%/°C								
Humidity								
95% RH								
MTBF								
>350,000 h @ 25°C (MIL-HDBK-217F)								
Physical	Dimension (L x W x H)							
	1.44 x 1.07 x 0.67 Inches (36.66 x 27.16 x 17.1 mm) Tolerance ±0.5 mm							
	Case Material							
	Plastic resin with Fiberglass (flammability to UL 94V-0)							
Weight								
26 g								
Cooling Method								
Free air convection								
Safety	Agency Approvals							
UL, cUL, CE, CB								
EMC	EMI (Conducted & Radiated Emission)							
	EN 55022 class B							
EMS (Noise Immunity)								
EN 55024								

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

2. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.

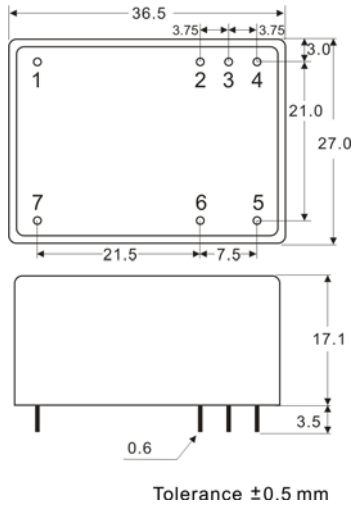
ELECTRICAL SPECIFICATIONS

Model No. (Dual Output)	AOC-5S3.3S	AOC-8S5S	AOC-12S5S
Max Output Wattage (W)	3.5W	3.6W	3.6W
Input	Voltage		
	90-264 VAC or 120-370 VDC		
	Frequency (Hz)		
	47-440 Hz		
	Current (Full load)		
	95 mA max. (115 VAC) / 65 mA max. (230 VAC)		
Inrush Current (<500us)			
15 A max. (115 VAC) / 25 A max. (230 VAC)			
Leakage Current			
0.25 mA max.			
External Fuse (recommend)			
3.15 A slow blow type			
Output	Voltage (V.DC.)		Vo : 5V Vr : 3.3V
	Voltage Accuracy		Vo : ±2% Vr : ±5%
	Current (mA) max		600 / 150
	Line Regulation (LL-HL) (typ.)		Vo : ±0.2% Vr : ±3%
	Load Regulation (25-100%) (typ.)		Vo : ±0.5% Vr : ±5%
	Minimum Load		25%
	Maximum Capacitive Load		Vo : 5600uF Vr : 4700uF
	Ripple & Noise (Vp-p) max		<200mV
	Efficiency		72%
	Hold-up Time		15 ms min.
	Switching Frequency		132±8 KHz
Protection	Over Power Protection		
	Hiccup technique, auto-recovery		
	Over Voltage Protection		
Zener diode clamp			
Short Circuit Protection			
Hiccup mode, indefinite (automatic recovery)			
Isolation	Input-Output (V.AC)		
3000V			
Environment	Operating Temperature		
	-40°C...+70°C (with derating)		
	Storage Temperature		
	-40°C...+85°C		
	Temperature Coefficient		
±0.02%/°C			
Humidity			
95% RH			
MTBF			
>350,000 h @ 25°C (MIL-HDBK-217F)			
Physical	Dimension (L x W x H)		
	1.44 x 1.07 x 0.67 Inches (36.66 x 27.16 x 17.1 mm) Tolerance ±0.5 mm		
	Case Material		
	Plastic resin with Fiberglass (flammability to UL 94V-0)		
Weight			
26 g			
Cooling Method			
Free air convection			
Safety	Agency Approvals		
UL, cUL, CE, CB			
EMC	EMI (Conducted & Radiated Emission)		
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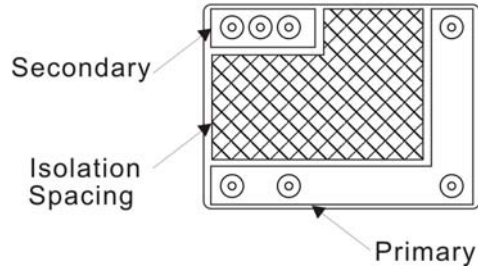
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2. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.

MECHANICAL DIMENSION (Top View)

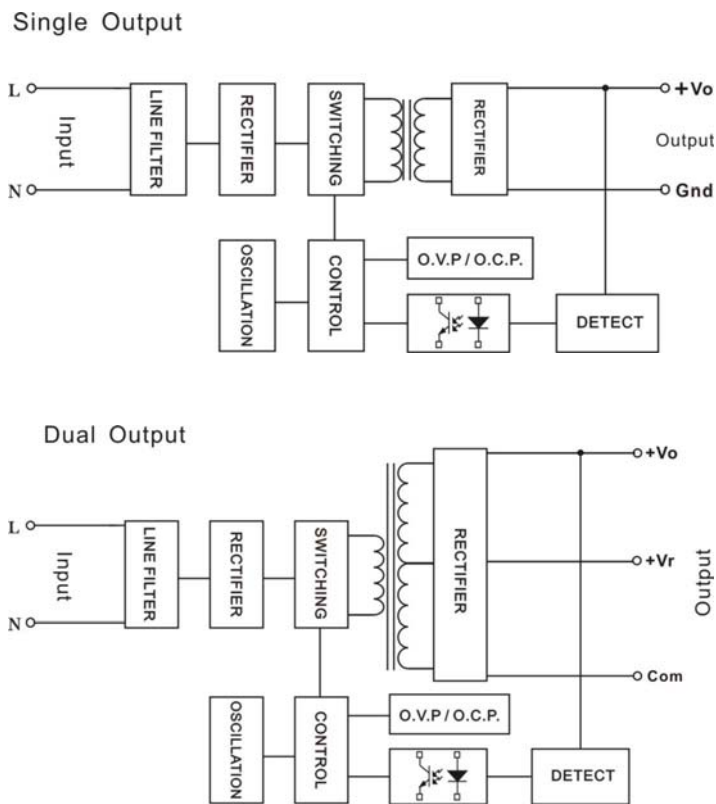


Isolation Bottom View



PIN#	Single	Dual
1	NC	NC
2	+Vo	+Vo
3	GND	COM
4	NC	+Vr
5	AC IN (L)	AC IN (L)
6	AC IN (N)	AC IN (N)
7	NC	NC

BLOCK DIAGRAM



DERATING

