

KEY FEATURES

- Switching Power Module for PCB Mountable
- Fully Encapsulated Plastic Case
- Universal Input Range 90-305VAC, 47-440 Hz
- Single and Dual Output
- Low Ripple and Noise
- Isolation Class II
- Maximum No-Load Watts < 0.3W
- CE , UL Approval
- 2-Years Product Warranty



ELECTRICAL SPECIFICATIONS

Model No. (Single Output)		AOCH -3.3S	AOCH -5S	AOCH -8S	AOCH -9S	AOCH -12S	AOCH -14S	AOCH -15S	AOCH -24S
Max Output Wattage (W)		3.96W	4W	4W	4W	4W	4W	4W	4W
Input	Voltage	90-305 VAC or 120-430 VDC							
	Frequency (Hz)	47-440 Hz							
	Current (Full load)	75 mA max. (115 VAC) / 55 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.)	±0.5%	±0.2%						
	Load Regulation (0-100%) (typ.)	±1.5%	±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	70%	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...+125°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							
EMC	EMI (Conducted & Radiated Emission)	EN 55022 class B							
	EMS (Noise Immunity)	EN 55024							

1. All specifications valid at nominal 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.

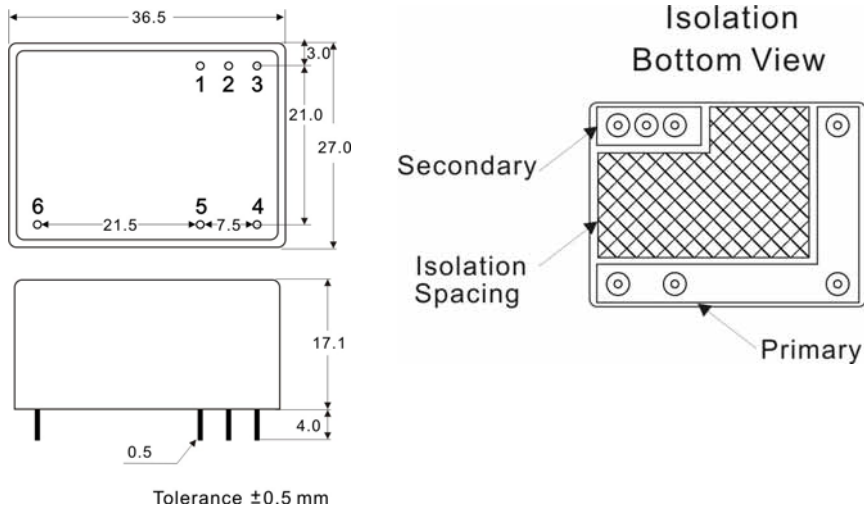
ELECTRICAL SPECIFICATIONS

Model No. (Dual Output)	AOCH-5S3.3S		AOCH-8S5S	AOCH-12S5S
Max Output Wattage (W)	3.5W		3.6W	3.6W
Input	Voltage	90-305 VAC or 120-430 VDC		
	Frequency (Hz)	47-440 Hz		
	Current (Full load)	85 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	Vo : 8V Vr : 5V	Vo : 12V Vr : 5V
	Voltage Accuracy	Vo : $\pm 2\%$ Vr : $\pm 5\%$		
	Current (mA) max	600 / 150	375 / 120	250 / 120
	Line Regulation (LL-HL) (typ.)	Vo : $\pm 0.2\%$ Vr : $\pm 3\%$		
	Load Regulation (0-100%) (typ.)	Vo : $\pm 0.5\%$ Vr : $\pm 5\%$		
	Minimum Load	25%		
	Maximum Capacitive Load	Vo : 5600uF Vr : 4700uF	Vo : 1000uF Vr : 4700uF	Vo : 330uF Vr : 4700uF
	Ripple & Noise (Vp-p) max	<200mV	<150mV	<100mV
	Efficiency	72%	74%	75%
	Hold-up Time	15 ms min.		
	Switching Frequency	132 $\pm$ 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...+125°C		
	Temperature Coefficient	$\pm 0.02\%/^{\circ}\text{C}$		
	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		
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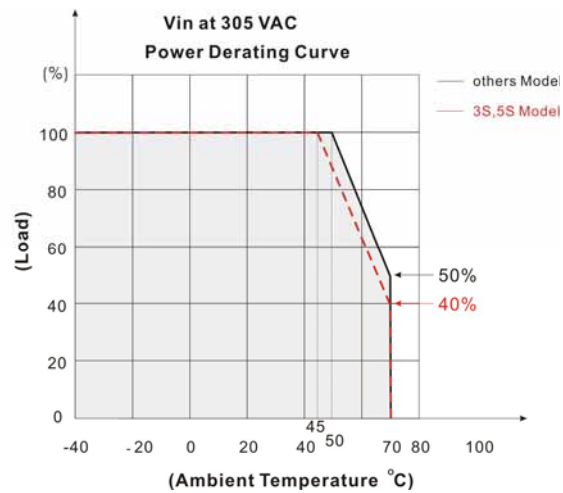
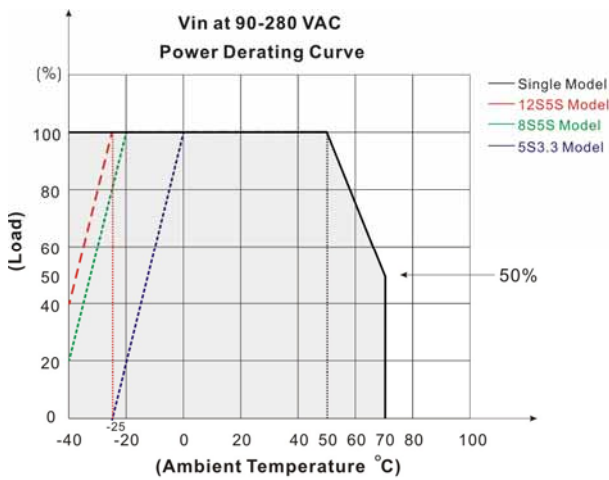
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MECHANICAL DIMENSION (Top View)



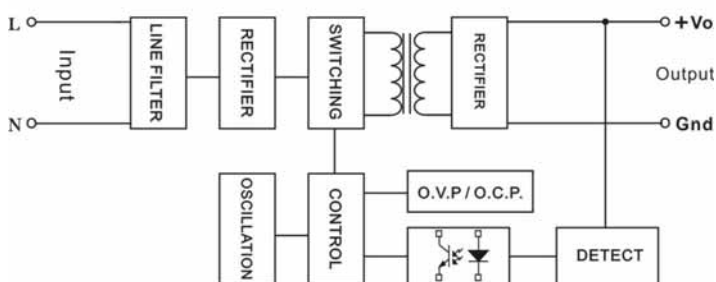
PIN#	Single	Dual
1	+Vo	+Vo
2	GND	COM
3	NC	+Vr
4	AC IN (L)	AC IN (L)
5	AC IN (N)	AC IN (N)
6	NC	NC

DERATING



BLOCK DIAGRAM

Single Output



Dual Output

