ARCH ELECTRONICS CORP.

AC-DC Power Module

AHC SERIES 5 Watts

KEY FEATURES

- Switching Power Module for PCB Mountable
- Fully Encapsulated Plastic Case
- Universal Input Range 90-264VAC, 47-440 Hz
- Regulated Output and Low Ripple and Low Noise
- Isolation Class II
- Small Size: 2.0 x 1.0 x 0.597 Inches
- Screw Terminal For Optional
- CE, UL Approval
- 2-Years Product Warranty



E199779 LEVEL3

ELECTRICAL SPECIFICATIONS

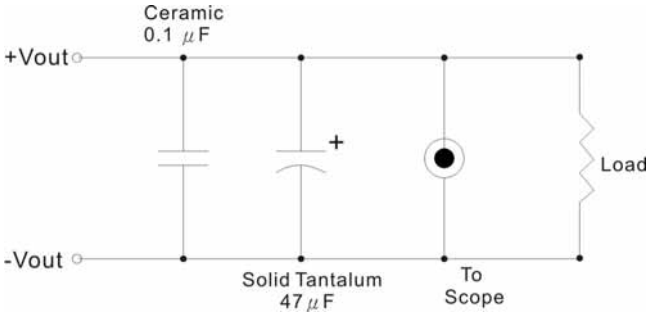
Model No.		AHC-3.3S	AHC-5S	AHC-12S	AHC-15S	AHC-24S
Max Output Wattage (W)		4W	5W	5W	5W	5.5W
Input	Voltage	90-264 VAC or 120-370 VDC				
	Frequency (Hz)	47-440 Hz				
	Current (Full load)	110 mA max. (115 VAC) / 70 mA max. (230 VAC)				
	Inrush Current (<2ms)	10 A max. (115 VAC) / 20 A max. (230 VAC)				
	Leakage Current	0.75 mA max.				
	External Fuse (recommend)	1.5 A slow blow type				
Output	Voltage (V.DC.)	3.3V	5V	12V	15V	24V
	Voltage Accuracy	±2%				
	Current (mA) max	1250	1000	420	333	230
	Line Regulation (LL-HL) (typ.)	±0.3%.				
	Load Regulation (5-100%) (typ.)	±0.5%.				
	Minimum Load	0%				
	Maximum Capacitive Load	13800 uF	6000 uF	1400 uF	1000 uF	170 uF
	Ripple	<0.2% Vout +40mV max (Vp-p)				
	Noise	<0.5% Vout +50mV max (Vp-p)				
	Efficiency	68%	71%	75%	75%	77%
	Hold-up Time	15 ms min.				
	Switching Frequency	132 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	-25°C…+70°C (with derating)				
	Storage Temperature	-40°C…+85°C				
	Temperature Coefficient	±0.02%/°C				
	Humidity	95% RH				
	MTBF	>360,000 h @ 25°C (MIL-HDBK-217F)				
Physical	Dimension (L x W x H)	2.0 x 1.0 x 0.597 Inches (50.8 x 25.4 x 15.16 mm) Tolerance ±0.5 mm				
	Case Material	Plastic resin with Fiberglass (flammability to UL 94V-0)				
	Weight	30 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.

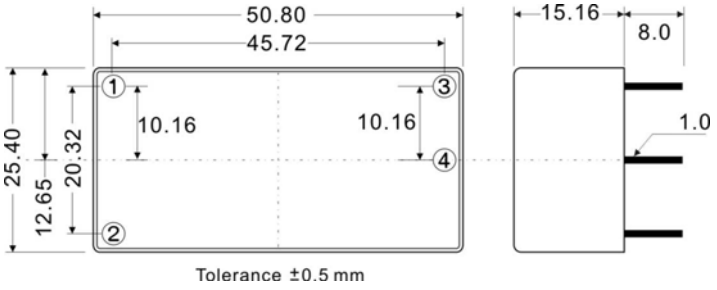
2.Ripple & Noise are measured at 20MHz of bandwidth with 0.1UF & 47UF parallel capacitor.

OUTPUT NOISE

The output noise is measured with 47μF tantalum capacitor and 0.1μF ceramic capacitor across output.

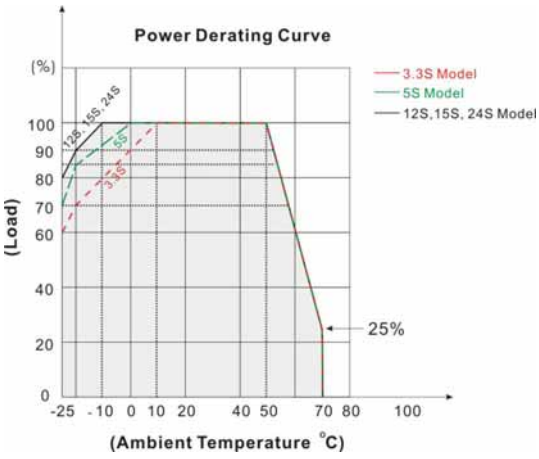


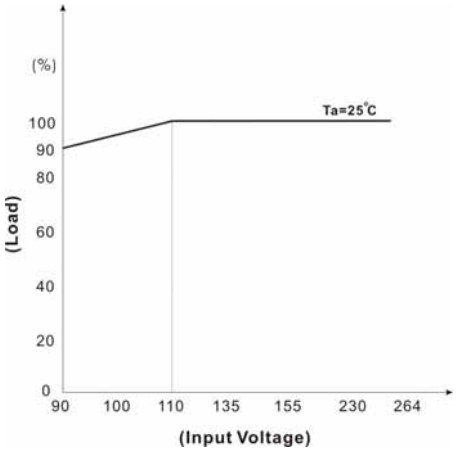
MECHANICAL DIMENSION (Top View)



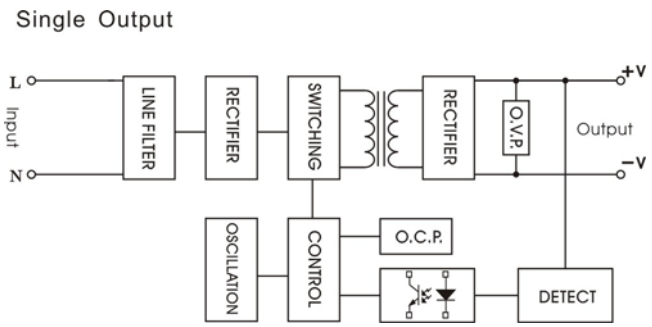
PIN#	SINGLE
1	AC IN (N)
2	AC IN (L)
3	+DC OUT
4	-DC OUT

DERATING





BLOCK DIAGRAM



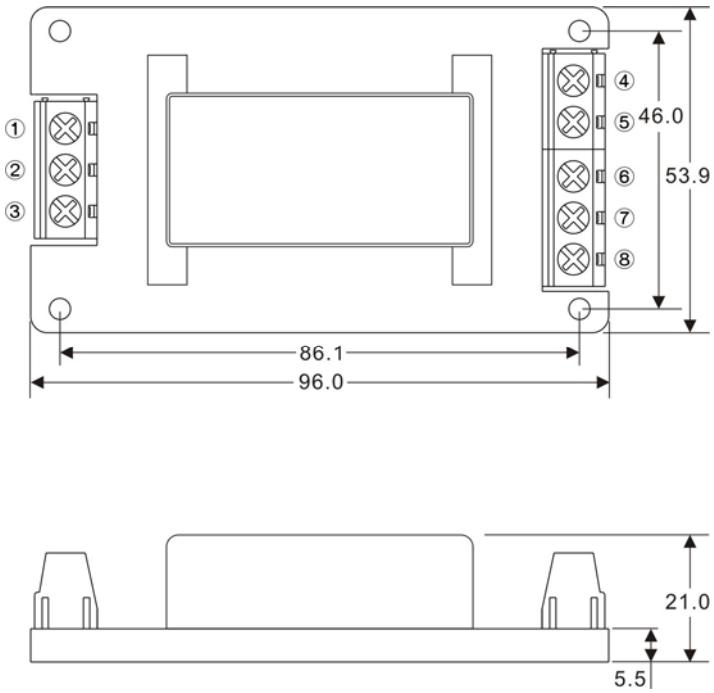
AHC SERIES 5 Watts

SCREW TERMINAL

AHC-A2



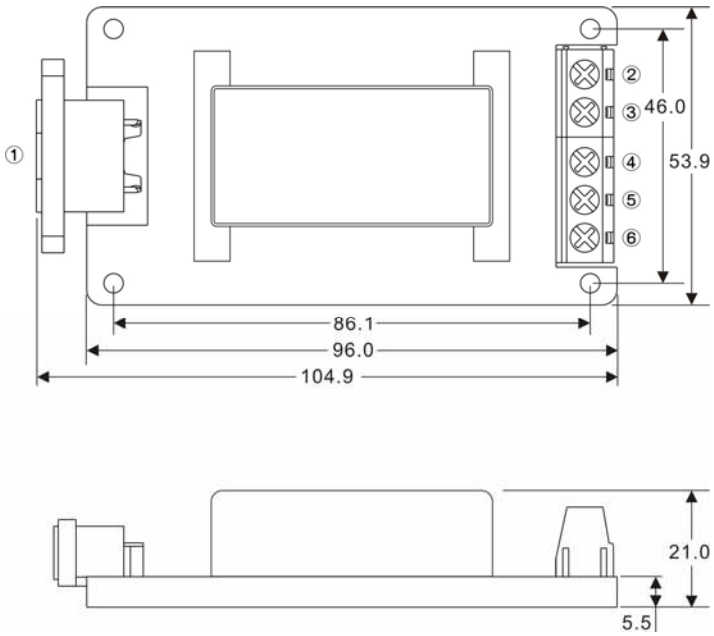
PIN#	Single
1	NO CONNECT
2	AC IN (N)
3	AC IN (L)
4.	NO CONNECT
5	+DC OUT
6	-DC OUT
7	NO CONNECT
8	NO CONNECT



AHC-A3



PIN#	Single
1	AC IN
2	NO CONNECT
3	+DC OUT
4.	-DC OUT
5	NO CONNECT
6	NO CONNECT

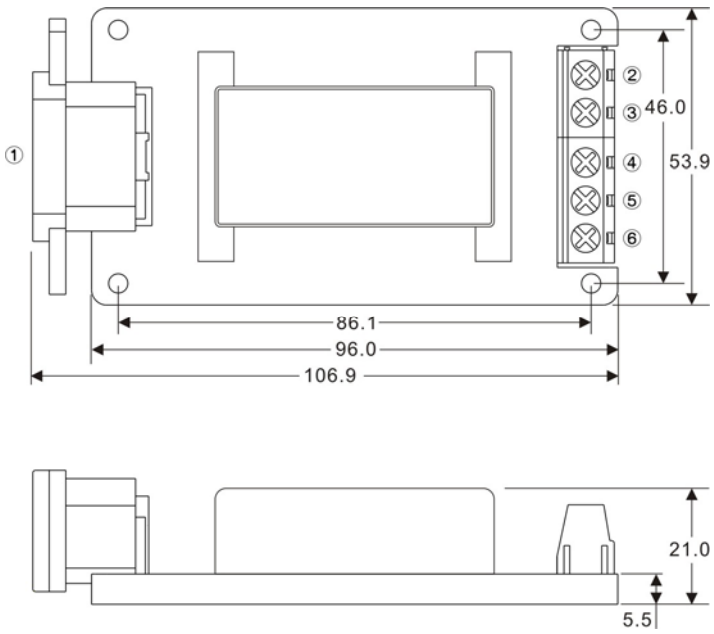


AHC SERIES 5 Watts

AHC-A4



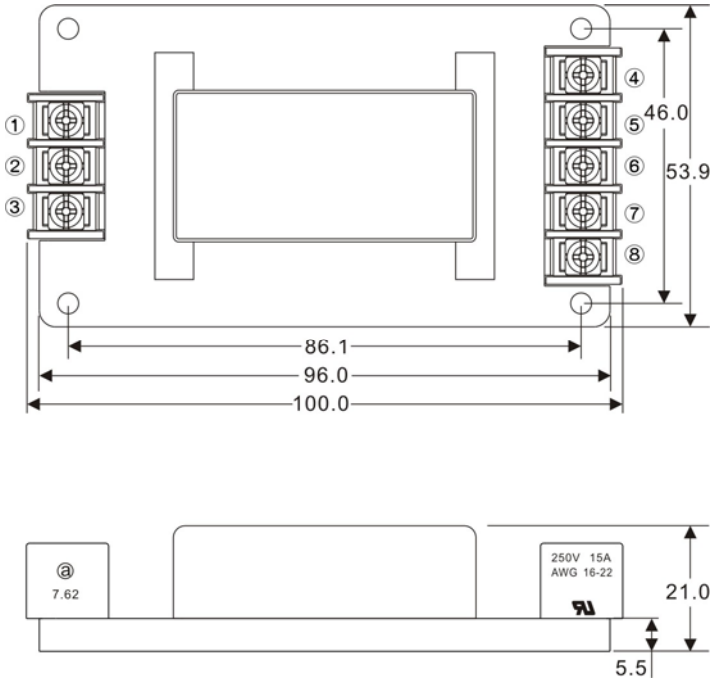
PIN#	Single
1	AC IN
2	NO CONNECT
3	+DC OUT
4.	-DC OUT
5	NO CONNECT
6	NO CONNECT



AHC-A5



PIN#	Single
1	NO CONNECT
2	AC IN (N)
3	AC IN (L)
4.	NO CONNECT
5	+DC OUT
6	-DC OUT
7	NO CONNECT
8	NO CONNECT

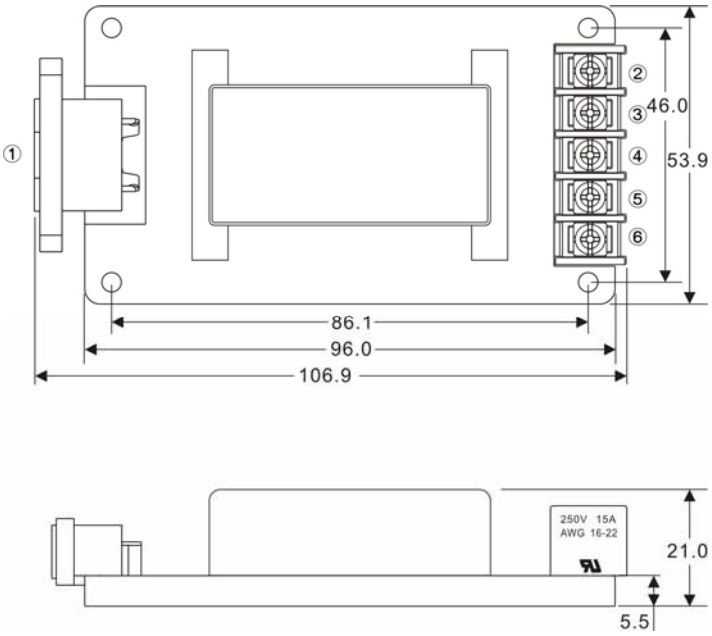


AHC SERIES 5 Watts

AHC-A6



PIN#	Single
1	AC IN
2	NO CONNECT
3	+DC OUT
4.	-DC OUT
5	NO CONNECT
6	NO CONNECT



AHC-A7



PIN#	Single
1	AC IN
2	NO CONNECT
3	+DC OUT
4.	-DC OUT
5	NO CONNECT
6	NO CONNECT

