ARCH ELECTRONICS CORP.

AC-DC Power Module

AHC-E1 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
- Low Ripple and Noise
- High Efficiency
- CE, UL Approval
- 2-Years Product Warranty

E199779 LEVEL3

ELECTRICAL SPECIFICATIONS

Model No.		AHC-3.3S-E1	AHC-5S-E1	AHC-12S-E1	AHC-15S-E1	AHC-24S-E1
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)	23 A max. (115 VAC) / 46 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	470-23,000μF depending on model				
	Ripple	<0.2% Vout +40mV max (Vp-p)				
	Noise	<0.5% Vout +50mV max (Vp-p)				
	Efficiency	64%	67%	73%	73%	75%
	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	-40°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				

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

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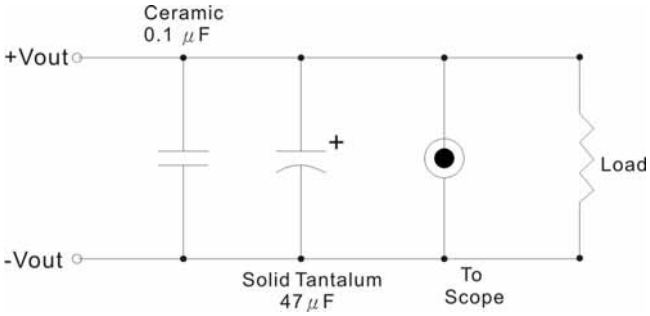
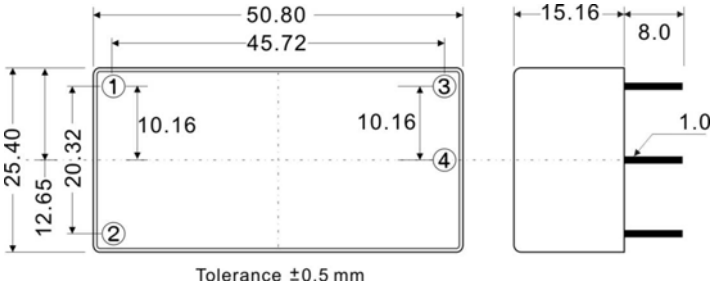
OUTPUT NOISE

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

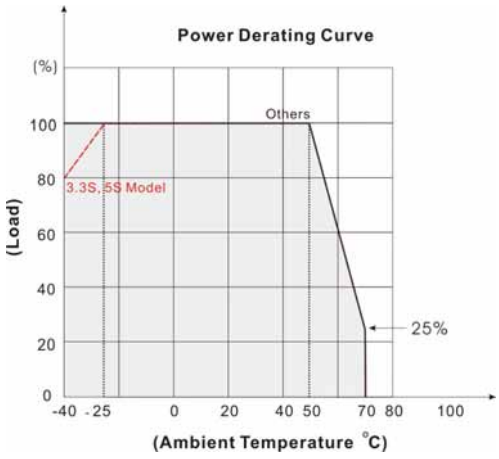


MECHANICAL DIMENSION (Top View)

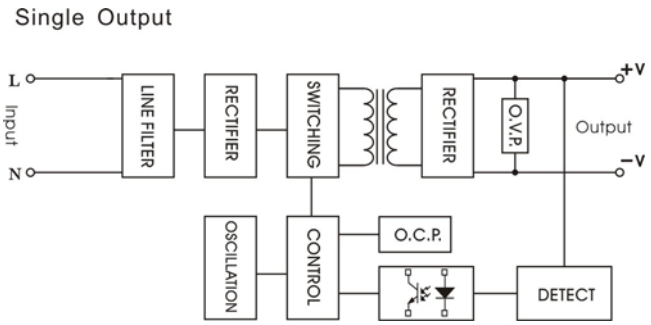


PIN#	SINGLE
1	AC IN (N)
2	AC IN (L)
3	+DC OUT
4	-DC OUT

DERATING



BLOCK DIAGRAM



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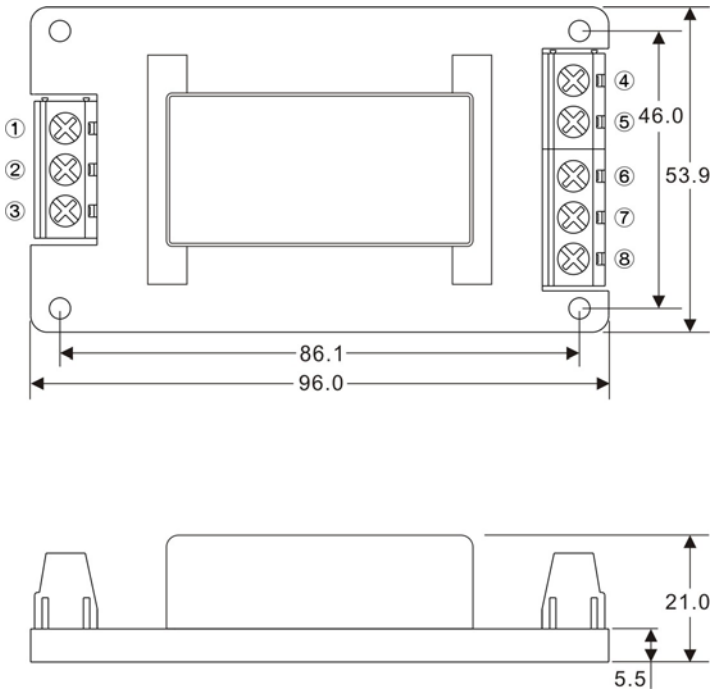
SCREW TERMINAL

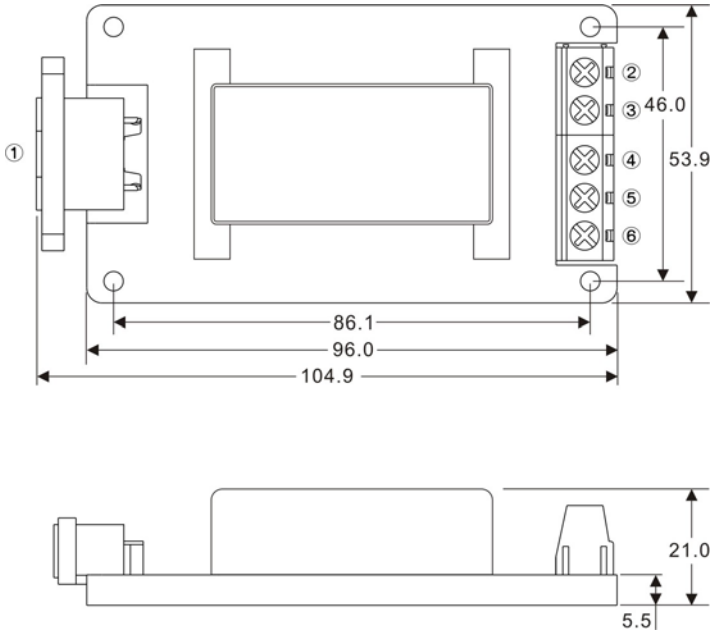
AHC-E1-A2

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- E1-A3

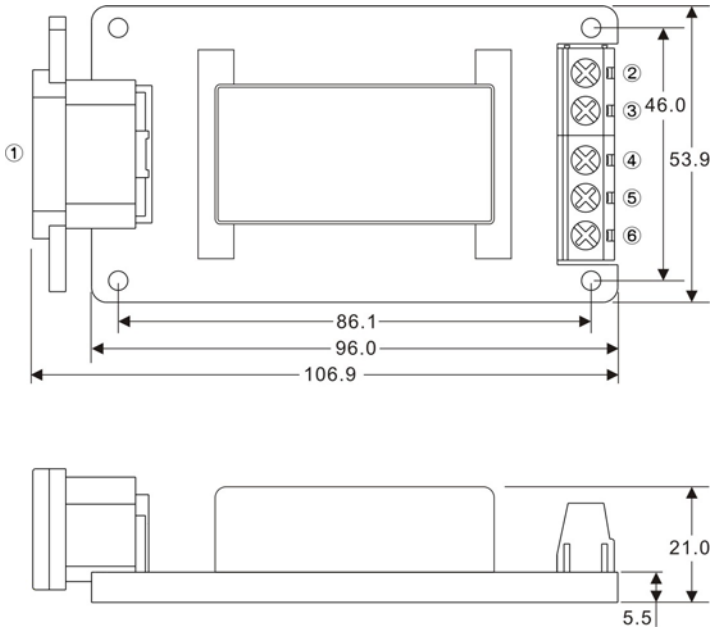
PIN#	Single
1	AC IN
2	NO CONNECT
3	+DC OUT
4.	-DC OUT
5	NO CONNECT
6	NO CONNECT



AHC-E1 SERIES 5 Watts

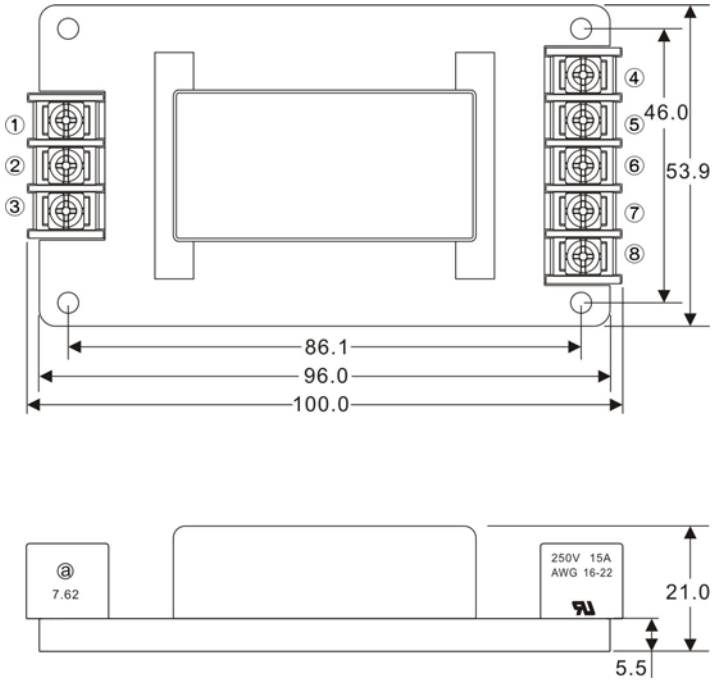
AHC- E1-A4

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



AHC- E1-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



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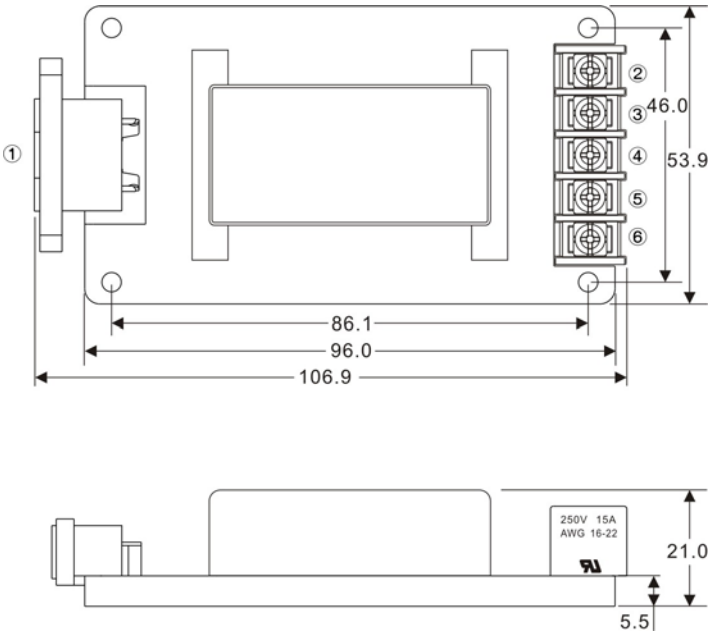
AHC- E1-A6

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



AHC- E1-A7

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