

**AHCH05 SERIES****5 Watts****KEY FEATURES**

- Ultra Compact Size: 2.04" x 1.04"
- Universal Input Range 90-305VAC, 47-440Hz
- I/O Isolation 4000VAC
- Operating Ambient Temperature Range -40°C to +85°C
- No Load Power Consumption < 0.1W
- Screw Terminal For Optional
- EMC Compliant without External Components
- Safety Approval to UL / IEC / EN 62368-1, IEC / EN 60950
- Meet IEC / EN 60335-1, IEC / EN 61558-2-16
- 3-Year Product Warranty

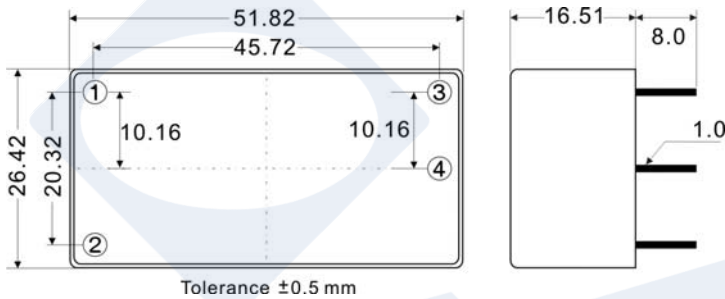
**ELECTRICAL SPECIFICATIONS**

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

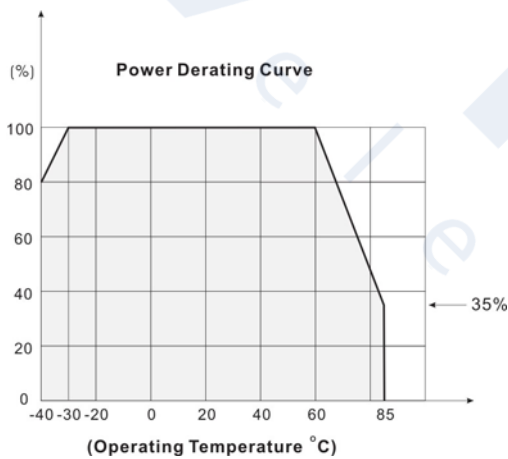
Model No. ( Single Output )	AHCH05-3.3S	AHCH05-5S	AHCH05-12S	AHCH05-24S
Max Output Wattage (W)	5W		5.04W	
Input	Voltage			
	90-305 VAC or 127-430 VDC			
	Frequency (Hz)			
	47-440 Hz			
	Current (Full load)			
150 mA max. (115 VAC) / 90 mA max. (230 VAC)				
Inrush Current (<500us)				
30 A max. (115 VAC) / 60 A max. (230 VAC)				
Leakage Current				
0.25 mA max.				
Output	Voltage (V.DC.)			
	3.3V	5V	12V	24V
	Voltage Accuracy			
	±2%			
	Current (mA) max			
	1515	1000	420	210
	Line Regulation (LL-HL) (typ.)			
	±0.2%			
Load Regulation (0-100%) (typ.)				
±1%				
±0.5%				
Maximum Capacitive Load				
3,500uF	2,200uF	330uF	70uF	
Ripple & Noise (Vp-p) max				
<100mV				
<150mV				
<200mV				
Efficiency (at 115VAC)				
73%	76%	80%	82%	
Hold-up Time (at 230VAC)				
15 ms min.				
Protection	Over Power Protection			
	Hiccup technique, auto-recovery $\geq$ 115% Io			
	Over Voltage Protection			
Zener diode clamp				
Short Circuit Protection				
Hiccup mode, indefinite (automatic recovery)				
Isolation	Input-Output (V.AC)			
4000V				
Environment	Operating Temperature			
	-40°C...+85°C ( with derating )			
	Storage Temperature			
	-40°C...+85°C			
	Temperature Coefficient			
	±0.02%/°C			
	Humidity			
95% RH				
MTBF				
>450,000 h @ 25°C (MIL-HDBK-217F)				
Vibration				
IEC60068-2-27 (10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes)				
Shock				
IEC60068-2-6				
Physical	Dimension (L x W x H)			
	2.04 x 1.04 x 0.65 Inches ( 51.82 x 25.42 x 16.51 mm ) Tolerance ±0.5 mm			
	Case Material			
	Plastic resin (flammability to UL 94V-0)			
Weight				
30 g				
Cooling Method				
Free air convection				
Safety	Agency Approvals			
	UL / IEC / EN 62368-1, IEC / EN 60950			
Meet				
IEC / EN 60335-1, IEC / EN 61558-2-16				
EMC	EMI (Conducted & Radiated Emission)			
	EN 55032 class B			
EMS (Noise Immunity)				
EN 55035				

**NOTE**

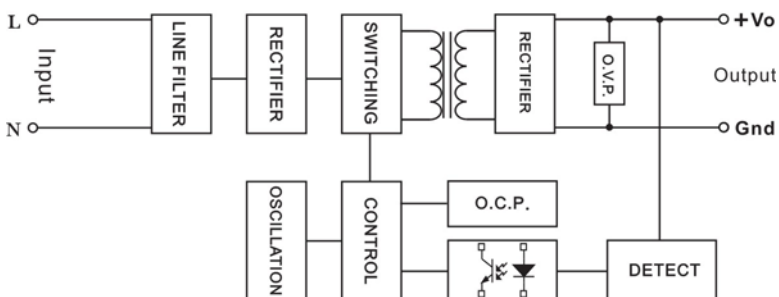
1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
2. Please refer to our PDF file "AC-DC Application" on our website: [www.archcorp.com.tw](http://www.archcorp.com.tw)

**MECHANICAL DIMENSION ( Top View )**


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

**DERATING**

**BLOCK DIAGRAM**

Single Output

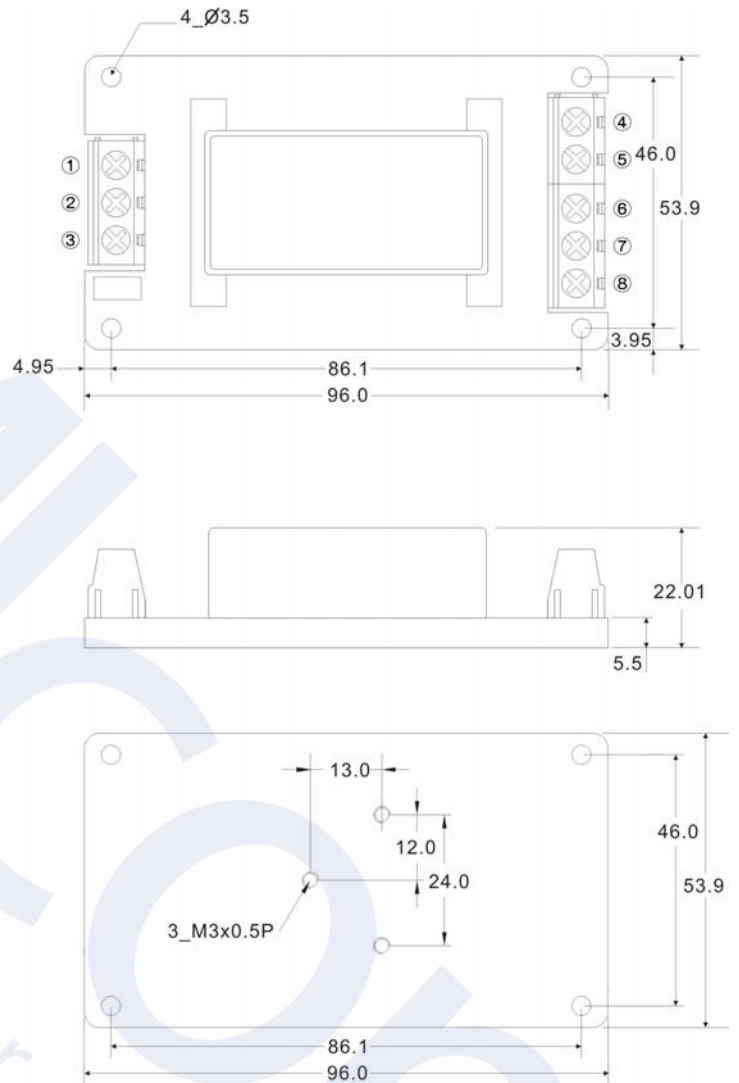


**SCREW TERMINAL**

**AHCH05-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



**KEY FEATURES**

- Ultra Compact Size: 2.1" x 1.1"
- Universal Input Range 90-305VAC, 47-440Hz
- I/O Isolation 4000VAC
- Operating Ambient Temperature Range -40°C to +85°C
- No Load Power Consumption < 0.1W
- High Efficiency up to 86%
- Screw Terminal For Optional
- EMC Compliant without External Components
- Safety Approval to UL / IEC / EN 62368-1, IEC / EN 60950
- Meet IEC / EN 60335-1, IEC / EN 61558-2-16
- 3-Year Product Warranty


**ELECTRICAL SPECIFICATIONS**

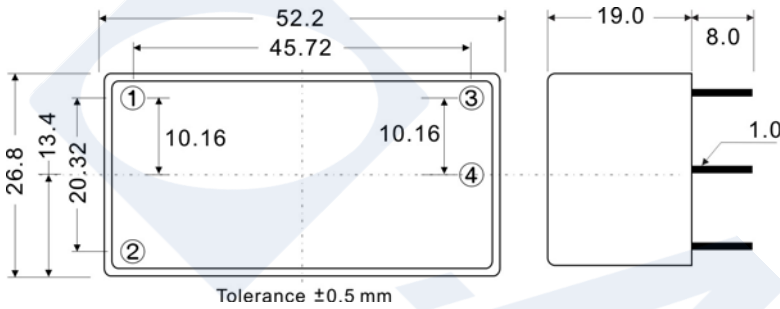
All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Model No. (Single Output)	AHCH10-5S	AHCH10-12S	AHCH10-15S	AHCH10-24S	
Max Output Wattage (W)	10W				
Input	Voltage	90-305 VAC or 120-430 VDC ( L Connect +Vin ;N Connect -Vin )			
	Frequency (Hz)	47-440 Hz			
	Current (Full load)	230 mA max. (115 VAC) / 140 mA max. (230 VAC)			
	Inrush Current	30 A max. (115 VAC) / 60 A max. (230 VAC)			
	Leakage Current	0.25 mA max.			
Output	Voltage (V.DC.)	5V	12V	15V	24V
	Voltage Accuracy	±2%			
	Current (mA) max	2000	833	667	417
	Line Regulation (LL-HL) (typ.)	±0.2%			
	Load Regulation (0-100%) (typ.)	±1%		±0.5%	
	Maximum Capacitive Load	3,500uF	630uF	470uF	180uF
	Ripple & Noise (Vp-p) max	<100mV		<150mV	
	Efficiency (at 230VAC)	80.5%	85%	86%	85.5%
Hold-up Time (at 230VAC)	30 ms min.				
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)	4000V			
Environment	Operating Temperature	-40°C...+85°C ( with derating )			
	Storage Temperature	-40°C...+85°C			
	Temperature Coefficient	±0.02%/°C			
	Humidity	95% RH			
	MTBF	>450,000 h @ 25°C (MIL-HDBK-217F)			
	Vibration	IEC60068-2-27 (10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes)			
	Shock	IEC60068-2-6			
Physical	Dimension (L x W x H)	2.055 x 1.055 x 0.75 Inches ( 52.2 x 26.8 x 19.0 mm ) Tolerance ±0.5 mm			
	Case Material	Plastic resin (flammability to UL 94V-0)			
	Weight	37 g			
	Cooling Method	Free air convection			
Safety	Agency Approvals	UL / IEC / EN 62368-1, IEC / EN 60950			
	Meet	IEC / EN 60335-1, IEC / EN 61558-2-16			
EMC	EMI (Conducted & Radiated Emission)	EN 55032 class B			
	EMS (Noise Immunity)	EN 55035			

**NOTE**

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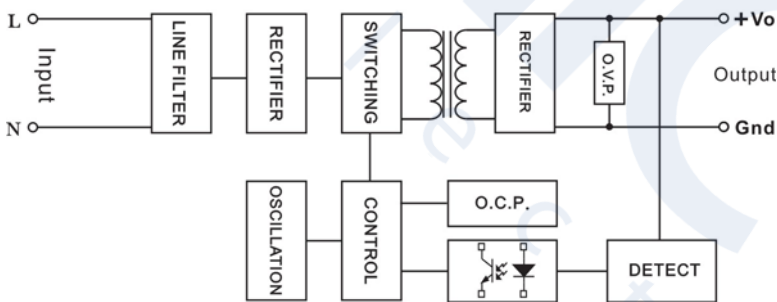
**MECHANICAL DIMENSION ( Top View )**



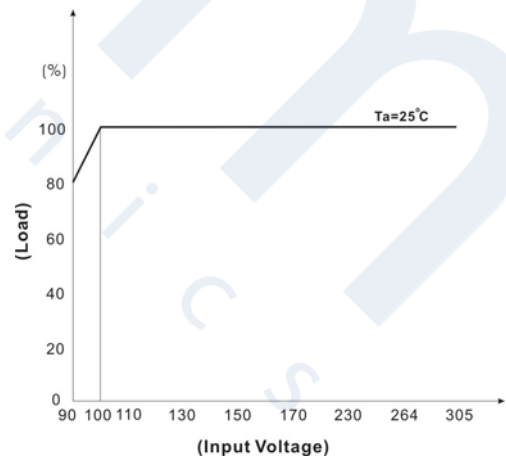
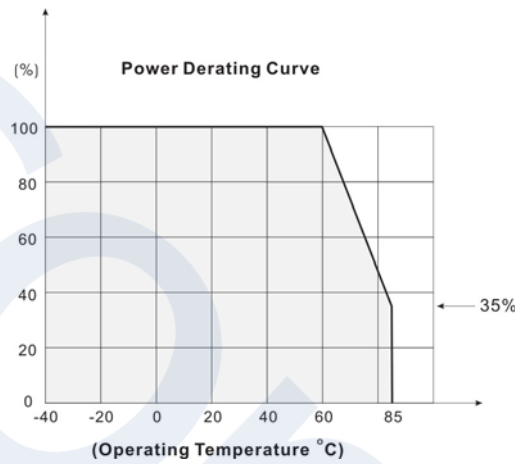
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3	+DC OUT
4	-DC OUT

**BLOCK DIAGRAM**

Single Output



**DERATING**



**SCREW TERMINAL**

**AHCH10-A2**



PIN#	Single
1	NO CONNECT
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4	NO CONNECT
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