

**AFCH25 SERIES**

**25 Watts**

**KEY FEATURES**

- Ultra Compact Size: 2.07" x 1.08"
- Universal Input Range 90-305VAC, 47-440Hz
- I/O Isolation 4000VAC
- Operating Ambient Temperature Range -40°C to +70°C
- No Load Power Consumption < 0.1W
- High Efficiency up to 88%
- Screw Terminal for Option
- EMC Compliant without External Components
- Safety Approval to UL / IEC / EN 62368-1, IEC / EN 60950-1, 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.	AFCH25-5.1S	AFCH25-12S	AFCH25-15S	AFCH25-24S
Max Output Wattage (W)	20W	25W	25W	25W
Input	Voltage			
	90-305 VAC or 120-430 VDC for ITE 90-264 VAC or 120-370 VDC for Household			
	Frequency (Hz)			
	47-440 Hz			
	Current (Full load)			
490 mA max. (115 VAC) / 320 mA max. (230 VAC)				
Inrush Current (<2ms, Cold Start)				
30 A max. (115 VAC) / 60 A max. (230 VAC)				
Leakage Current				
0.25 mA max. (230 VAC)				
Output	Voltage (V.DC.)			
	5.1V	12V	15V	24V
	Voltage Accuracy			
	±2%			
	Current (mA) max			
	3922	2083	1666	1042
	Maximum Capacitive Load			
	2000uF	680uF	220uF	220uF
	Minimum Load			
	0%			
Line Regulation (LL-HL) (typ.)				
±1%				
Load Regulation (5-100%) (typ.)				
±3%		±2%		
Ripple & Noise				
120mV max (Vp-p)		150mV max (Vp-p)		
160mV max (Vp-p)		240mV max (Vp-p)		
Efficiency (at 230 VAC)				
84%		88%		
88%		87%		
Hold-up Time (typ)				
36 ms (at 230VAC)				
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...+70°C (with derating)			
	Storage Temperature			
	-40°C...+85°C			
	Temperature Coefficient			
	±0.05%/°C			
	Humidity			
95% RH				
MTBF				
>400,000 h @ 25°C (MIL-HDBK-217F)				
Vibration				
IEC60068-2-6 (10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes)				
Shock				
IEC60068-2-27				
Physical	Dimensions (L x W x H)			
	2.07 x 1.08 x 0.93 Inches ( 52.5 x 27.5 x 23.5 mm ) Tolerance ±0.5 mm			
	Case Material			
	Plastic resin (flammability to UL 94V-0)			
Weight				
55 g				
Cooling Method				
Free air convection				
Safety	Agency Approvals			
	UL / IEC / EN 62368-1, IEC / EN 60950-1, IEC / EN 60335-1(A2 Series N/A), IEC / EN 61558-2-16(A2 Series N/A)			
EMC	EMI (Conducted & Radiated Emission)			
	EN 55032 class B			
EMS (Noise Immunity)				
EN 55035				

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**NOTE**

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



2. **SMPS** incorporating a short-circuit-proof safety isolating transformer (non-inherently)



3. **SMPS** (Switching mode power supply unit)

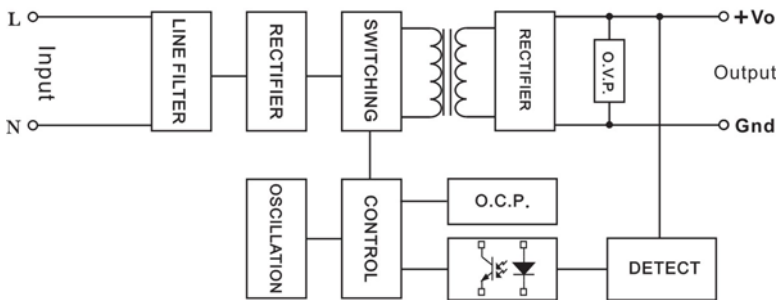
4. **CAUTION: Double pole, neutral fusing. Disconnect mains before servicing.**

**(ATTENTION : 2 poles avec fusible sur le neutre. Deconnecter le secteur avant intervention.)**

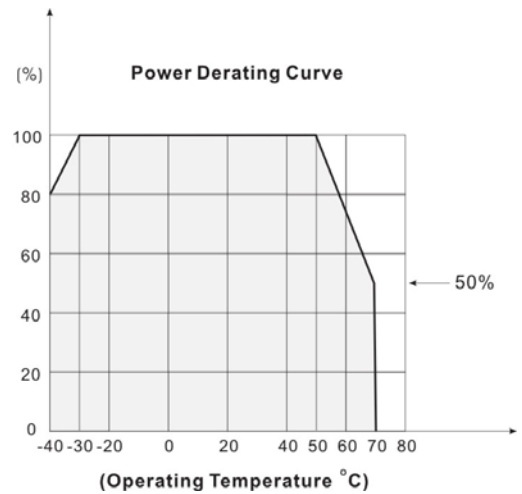
5. Please refer to our PDF file "AC-DC Application" on our website: www.archcorp.com.tw

**BLOCK DIAGRAM**

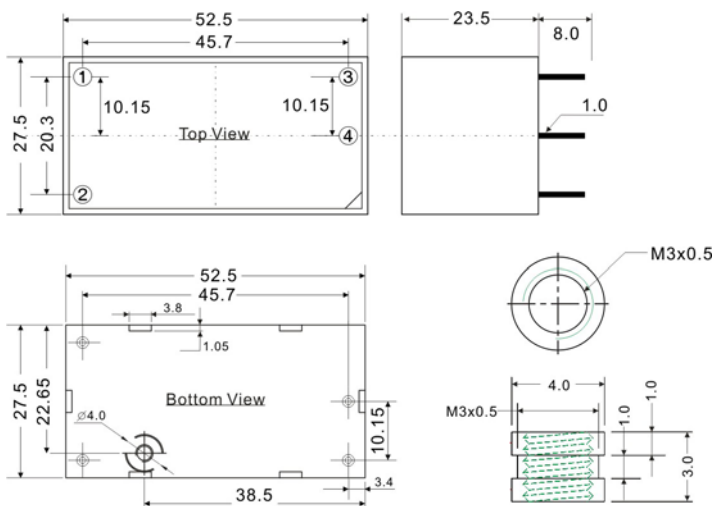
Single Output



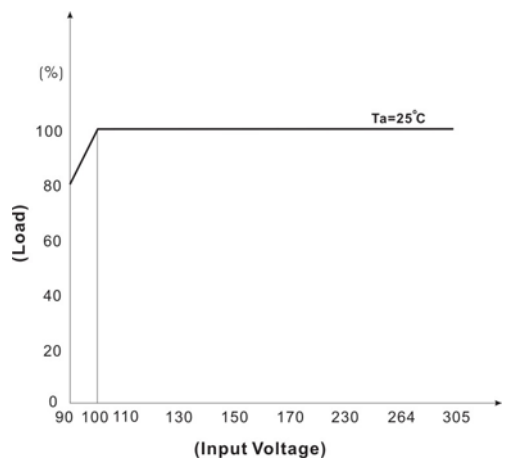
**DERATING**



**MECHANICAL DIMENSIONS (Top View)**



Maximum Torque 1 2 { 1.2 1 } ( k g f . c m { N . m } )



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



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**SCREW TERMINAL**

**AFCH25-A2**



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

