

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%
- Operating altitude 5000m (UL / IEC / EN 62368-1)
- 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			
	Frequency (Hz)			
	47-440 Hz			
	Current (Full load)			
Output	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)			
	Voltage (V.DC.)	5.1V	12V	15V
	Voltage Accuracy	±2%		
	Current (mA) max	3922	2083	1666
	Maximum Capacitive Load	2000uF	680uF	220uF
	Minimum Load	0%		
Protection	Line Regulation (LL-HL) (typ.)	±1%		
	Load Regulation (5-100%) (typ.)	±3%	±2%	
	Ripple & Noise (Vp-p) (max.)	120mV	150mV	160mV
	Efficiency (at 230 VAC)	84%	88%	88%
	Hold-up Time (typ)	36 ms (at 230VAC)		
Isolation	Over Power Protection	Hiccup technique, auto-recovery		
	Over Voltage Protection	Zener diode clamp		
	Short Circuit Protection	Hiccup mode (automatic recovery)		
Isolation	Input-Output (V.AC)	4000V		
Environment	Operating Temperature (Note 4)	-40°C...+70°C (with derating)		
	Storage Temperature	-40°C...+85°C		
	Temperature Coefficient	±0.05%/°C		
	Altitude During Operation (UL / IEC / EN 62368-1)	5000m		
	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. Due to varying customer application conditions, the product is tested for maximum operating temperature under full load only. For other regulatory requirements, please contact ARCH.

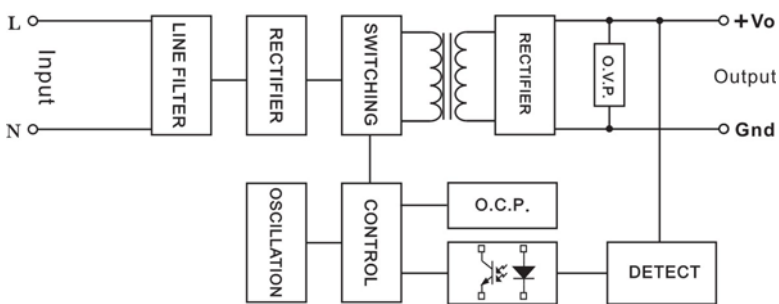
5. CAUTION: Double pole, neutral fusing. Disconnect mains before servicing.

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

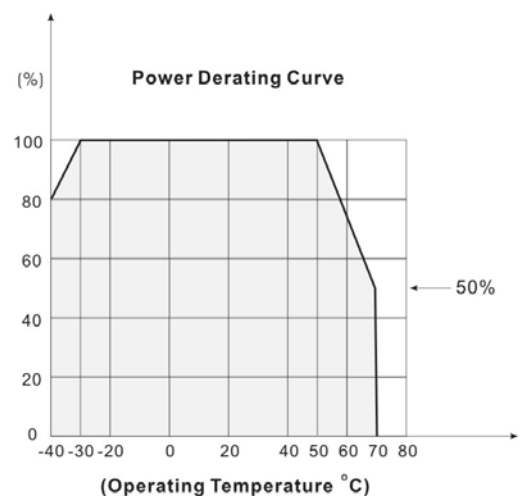
6. Please refer to our PDF file "AC-DC Application" on our website: www.archcorp.com.tw

BLOCK DIAGRAM

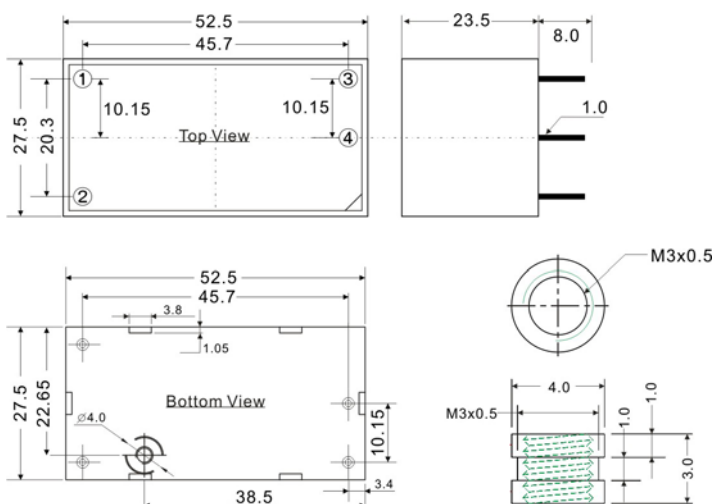
Single Output



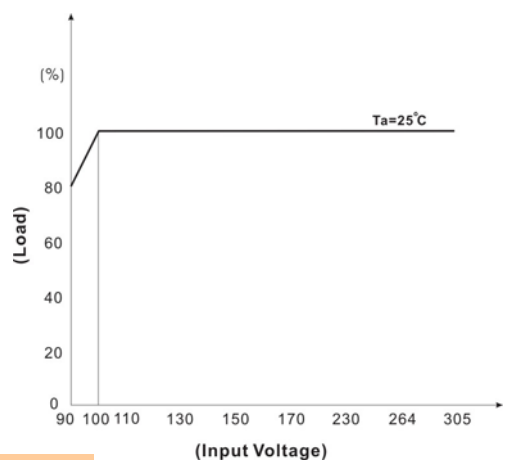
DERATING



MECHANICAL DIMENSIONS (Top View)



Maximum Torque 12 { 1.21 } (k g f . c m { N . m })



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

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

