

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, 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%
Protection	Hold-up Time (typ)	36 ms (at 230VAC)			
	Over Power Protection	Hiccup technique, auto-recovery			
	Over Voltage Protection	Zener diode clamp			
Isolation	Short Circuit Protection	Hiccup mode, indefinite (automatic recovery)			
	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, 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)

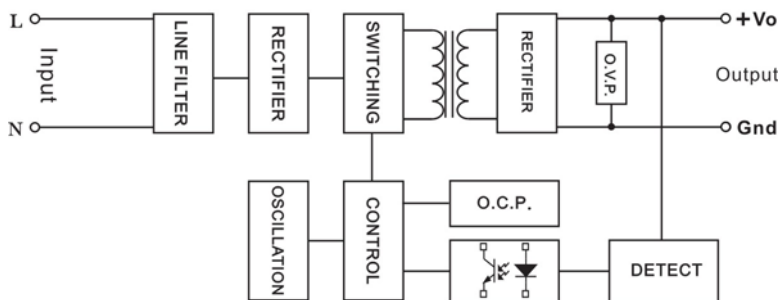
3. **SMPS** (Switching mode power supply unit)

4. **CAUTION: Double pole, neutral fusing. Disconnect mains before servicing.**
(ATTENTION : 2 poles avec fusible sur le neutre. Deconnecter le secteur avant intervention.)

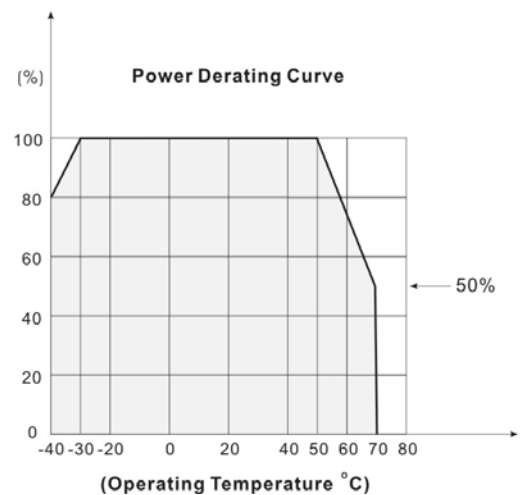
5. Please refer to our PDF file "AC-DC Application" on our website: www.archcorp.com.tw

BLOCK DIAGRAM

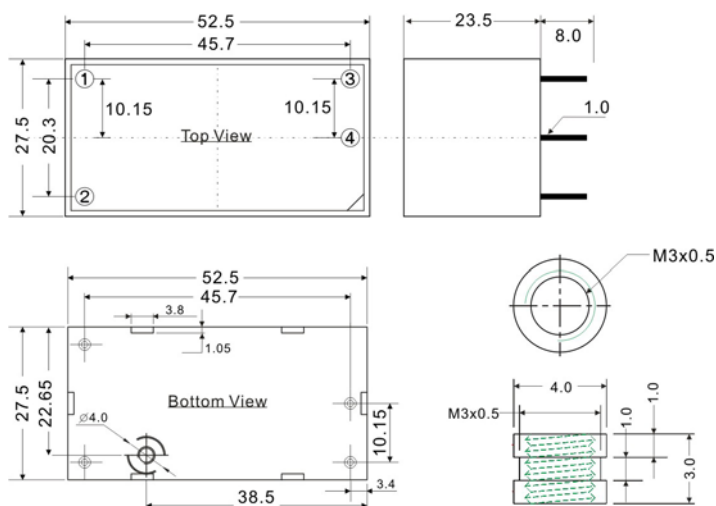
Single Output



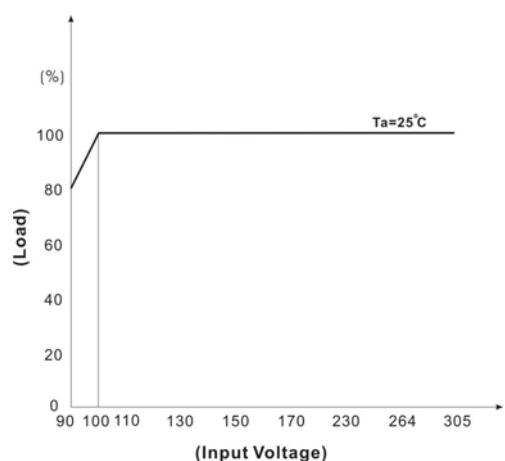
DERATING



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

AFCH25 SERIES
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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

