

## KEY FEATURES

- Universal Input 90-264Vac
- 125W with Natural Convection
- Safety Approval to UL / IEC / EN 62368-1
- EMI for Both Class I (with PE) and Class II (without PE) Configuration
- No Load Power Consumption < 0.3W
- -30°C to +70°C Wide Range Operation Temperature
- Operating Altitude 5000M
- Active PFC Function
- I/O Isolation 4000VAC
- 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.		ARF1300-12S	ARF1300-24S	ARF1300-48S	
Max Output Wattage (with 8CFM FAN) (W)		130 W			
Max Output Wattage (Natural Convection)		110 W (115 VAC) / 119 W (230 VAC)		115 W (115 VAC) / 125 W (230 VAC)	
Input	Voltage (Note 3)	90-264 VAC			
	Frequency (Hz)	47-63 Hz			
	Current (Full load)	< 2.0 A max. (115 VAC) / < 1.0 A max. (230 VAC)			
	Inrush Current (<2ms)	< 50 A max. (115 VAC) / < 85 A max. (230 VAC)			
	Leakage Current	< 0.1mA / 264 VAC (Touch Current)			
	Power Factor (at 230 VAC)	PF>0.9 at Full Load			
	No Load	< 0.3W (115 / 230 VAC)			
Output	Voltage (V.DC.)	12V	24V	48V	
	Voltage Adj Range (V.DC.)	±10% Output Voltage			
	Voltage Accuracy	±2%			
	Current (with 8CFM FAN) (A) (max.)	10.833	5.417	2.708	
	Current (Natural Convection) (A) (max.)	at 115 VAC	9.166	4.583	2.395
		at 230 VAC	9.917	4.958	2.604
	Line Regulation	±1%			
	Load Regulation (10-100%)	±1%			
	Minimum Load	0%			
	Maximum Capacitive Load	4,000µF	1,000µF	330µF	
	Ripple & Noise (max.) (Note 1)	160mV	240mV	340mV	
	Efficiency (at 230VAC)	90%	90%	91%	
Hold-up Time (at 115 VAC) (Note 2)	8 ms min.				
Protection	Over Power Protection	Protection level 1 (nominal) : Auto recovery, Hiccup mode			
		Protection level 2 (instantaneous high current) : Latch			
	Over Voltage Protection	Protection level 1 (nominal) : Auto recovery			
		Protection level 2 (instantaneous high voltage) : Latch			
Over Temperature Protection	Auto recovery				
Short Circuit Protection	Protection level 1 (nominal) : Continuous, Auto recovery				
	Protection level 2 (instantaneous high current) : Latch				
Isolation	Input-Output (Note 4)	4000VAC or 5656VDC			
	Input-PE (Note 4)	2000VAC or 2828VDC			
	Output-PE (Note 4)	1500VAC or 2121VDC			



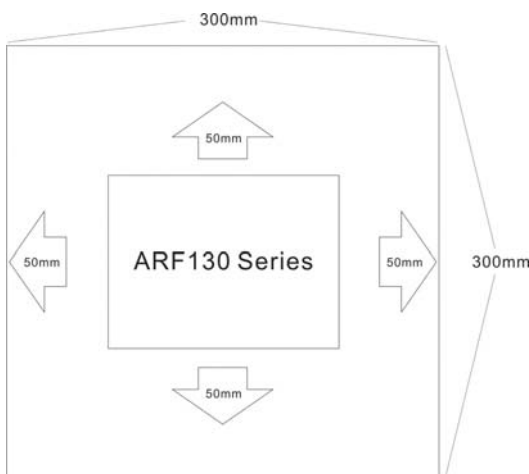
**ELECTRICAL SPECIFICATIONS**

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

Model No.	ARF1300-12S	ARF1300-24S	ARF1300-48S
Environment	Operating Temperature	-30°C...+70°C (with derating)	
	Storage Temperature	-30°C...+80°C	
	Temperature Coefficient	±0.05%/°C	
	Altitude During Operation	5000m	
	Humidity	20~90% RH	
	MTBF	>250,000 h @ 25°C (MIL-HDBK-217F, Notice 1)	
	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)	3.59 x 2.15 x 1.36 Inches ( 91.19 x 54.61 x 34.6 mm ) Tolerance ±0.5 mm	
	Weight	200 g	
	Cooling Method	Natural Convection / 8CFM FAN	
Safety	Approval	UL / IEC / EN 62368-1	
EMC	Conducted EMI (Note 6)	EN55032 Class B	
	Radiated EMI (Note 6)	EN55032 Class I Class B / Class II Class A	
	EMS	EN55035	

**NOTE**

1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
2. Hold-up Time measured at 90% Vout.
3. Please check the derating curve for more details.
4. Strongly recommend to conduct this test with DC Voltage. If customer wishes to test with AC Voltage, please disconnect all Y-Capacitors from Arch power supply.
5. Please secure the power supply unit to your metal case by using the four screw holes in the corners for either Class I or Class II equipment
6. The size of the suggested aluminum plate is shown as below. The aluminum plate must have an even and smooth surface (or coated with thermal grease), and ARF130 series must be firmly mounted at the center of the aluminum plate.  
300 x 300 x 3.0 mm



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

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

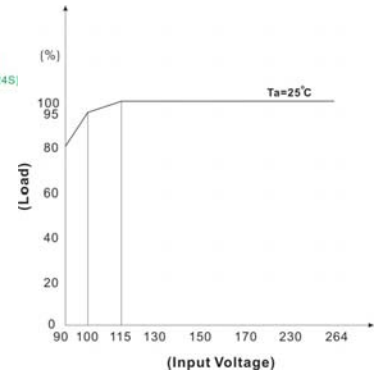
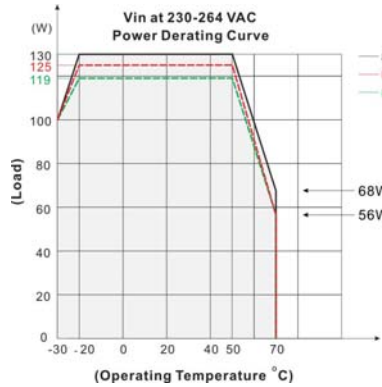
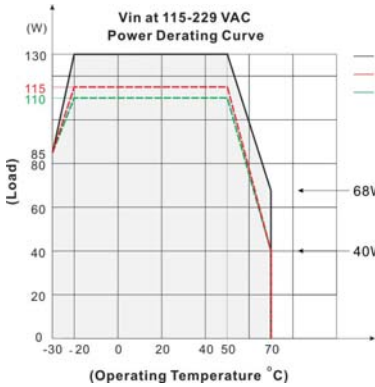
8 The ambient temperature derating of 3.5 /1000m with fanless models and of 5 /1000m with fan models for operating altitude higher.



**ARF1300 SERIES**

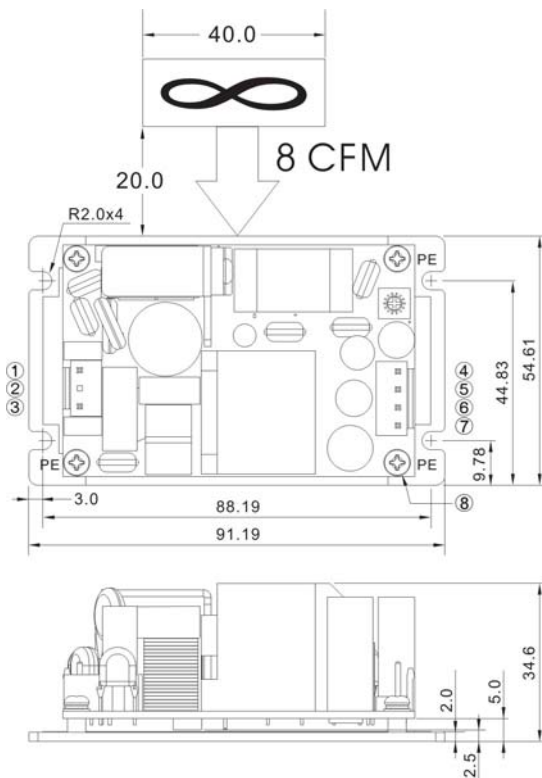
**130 Watts**

**DERATING**

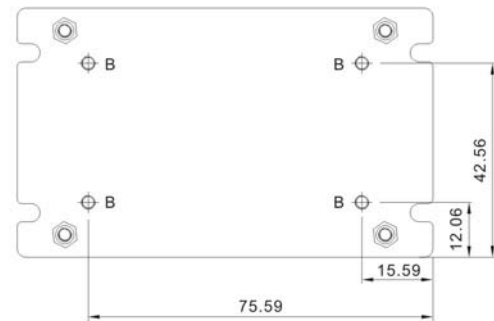
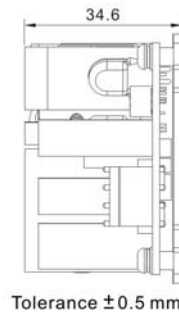


If input voltage is lower than 115VAC, please refer to the output derating V.S. input voltage curve for details

**MECHANICAL DIMENSIONS ( Top View )**

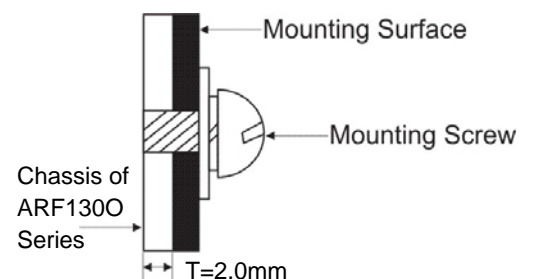


B=For fixture to pcb/chassis only  
B=M3x0.5P  
Torque:3±0.5 Kgf.cm



**ASSEMBLY INSTRUCTIONS**

\*Heatsink T=2.0mm  
Customer is advised to screw into the threads no more than 2.0mm



Brands		Alex		JST	
PIN#	Single	Mating Housing	Terminal	Mating Housing	Terminal
1	AC IN (N)	9396-3	96T series	VHR-3N	SVH-41T-P1.1
2	NO PIN				
3	AC IN (L)				
4~5	+DC OUT	9396-4	96T series	VHR-4N	SVH-41T-P1.1
6~7	-DC OUT				
8	PE	—	—	—	—