

## 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 10CFM 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)			
	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 10CFM 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	1% Vout		
	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			
Overt 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

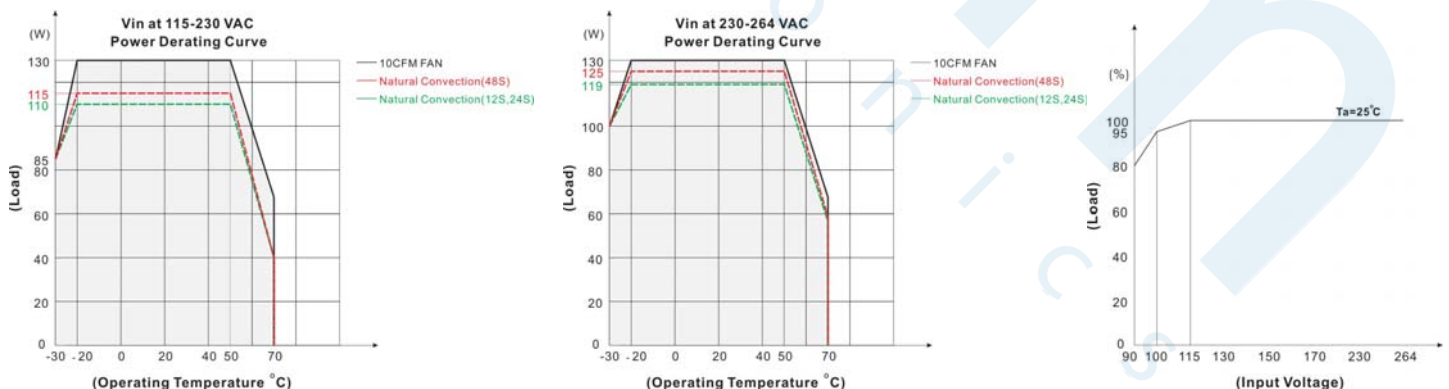
All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

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 1.32 Inches ( 91.19 x 54.61 x 33.5 mm ) Tolerance ±0.5 mm	
	Weight	200 g	
	Cooling Method	Natural Convection / 10CFM FAN	
Safety	Approval	UL / IEC / EN 62368 (In Progress)	
EMC	Conducted EMI (Note 5)	EN55032 Class B (In Progress)	
	Radiated EMI (Note 5)	EN55032 Class I Class B / Class II Class A (In Progress)	
	EMS	EN55035 (In Progress)	

## NOTE

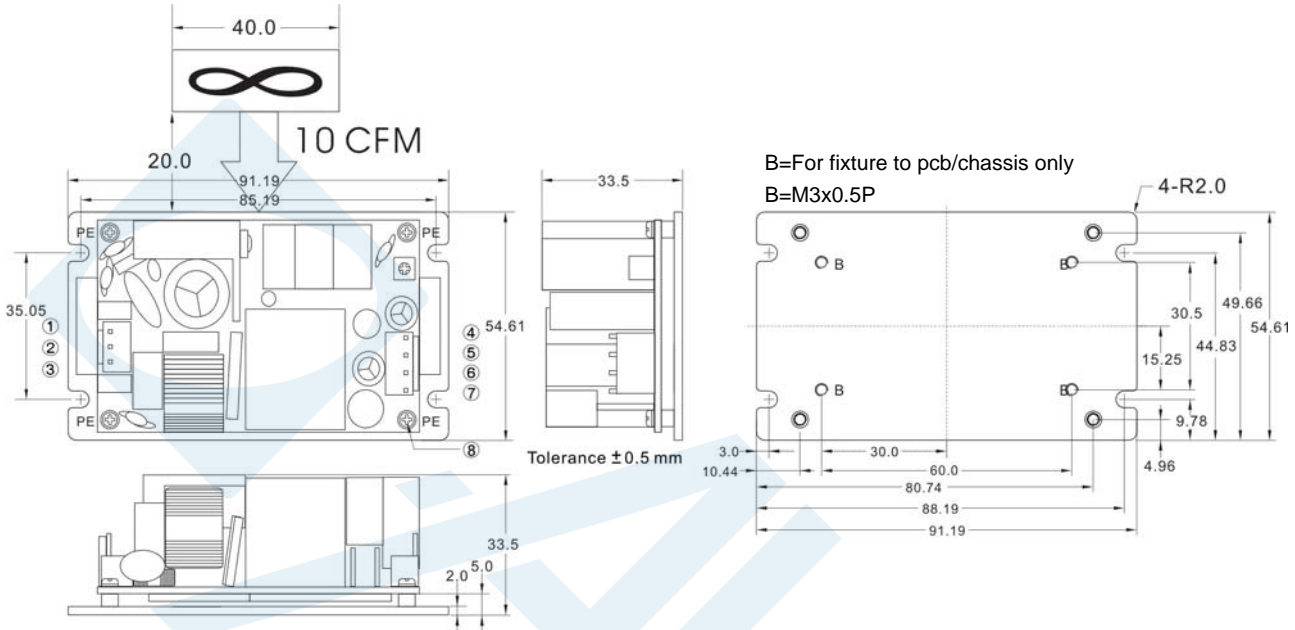
- Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
- Hold-up Time measured at 90% Vout.
- Please check the derating curve for more details.
- Strongly recommend to conduct this test with DC Voltage. If customer wishes to test with AC Voltage, please disconnect all Y-Capacitors from Arch power supply.
- 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
- CAUTION: Double pole, neutral fusing. Disconnect mains before servicing.**
- The ambient temperature derating of 3.5 /1000m with fanless models and of 5 /1000m with fan models for operating altitude higher.

## DERATING



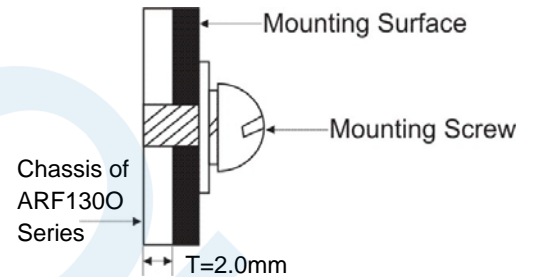
If input voltage is lower than 115VAC, please refer to the output derating V.S. input voltage curve for details

**MECHANICAL DIMENSION ( Top View )**



**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)	9396-4	96T series	VHR-4N	SVH-41T-P1.1
4~5	+DC OUT				
6~7	-DC OUT				
8	PE	—	—	—	—