

## ARF1300 SERIES

130 Watts

## 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	< 0.75mA / 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%
Protection	Hold-up Time (at 115 VAC) (Note 2)	8 ms min.		
	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		

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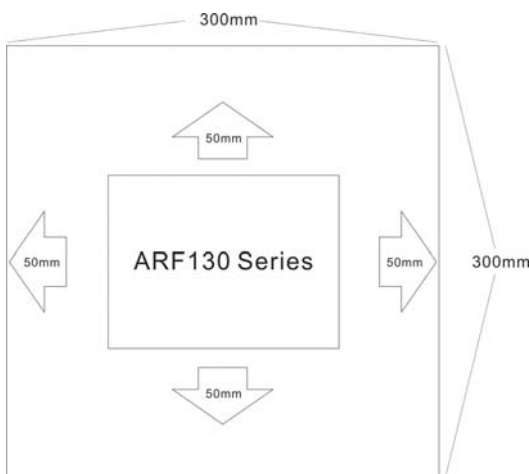
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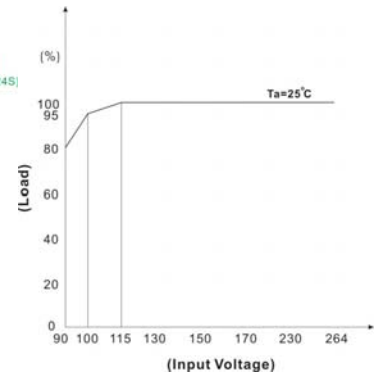
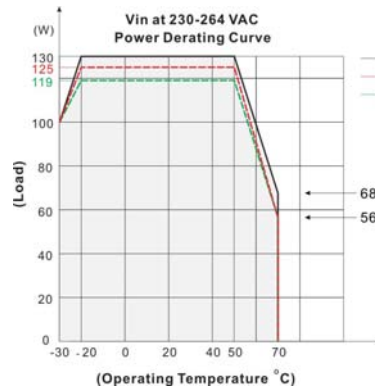
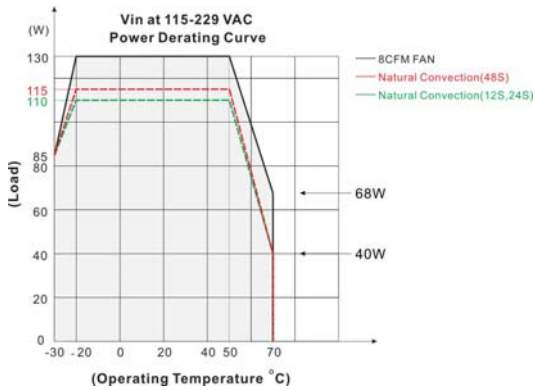
Model No.		ARF130O-12S	ARF130O-24S	ARF130O-48S
Environment	Operating Temperature	-30°C...+70°C (with derating)		
	Storage Temperature	-30°C...+80°C		
	Temperature Coefficient	±0.05%/°C		
	Altitude During Operation	5000m		
	Humidity	20~90% RH		
	MTBF	>400,000 h @ 25°C (MIL-HDBK-217F, Notice 1)		
	Vibration	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

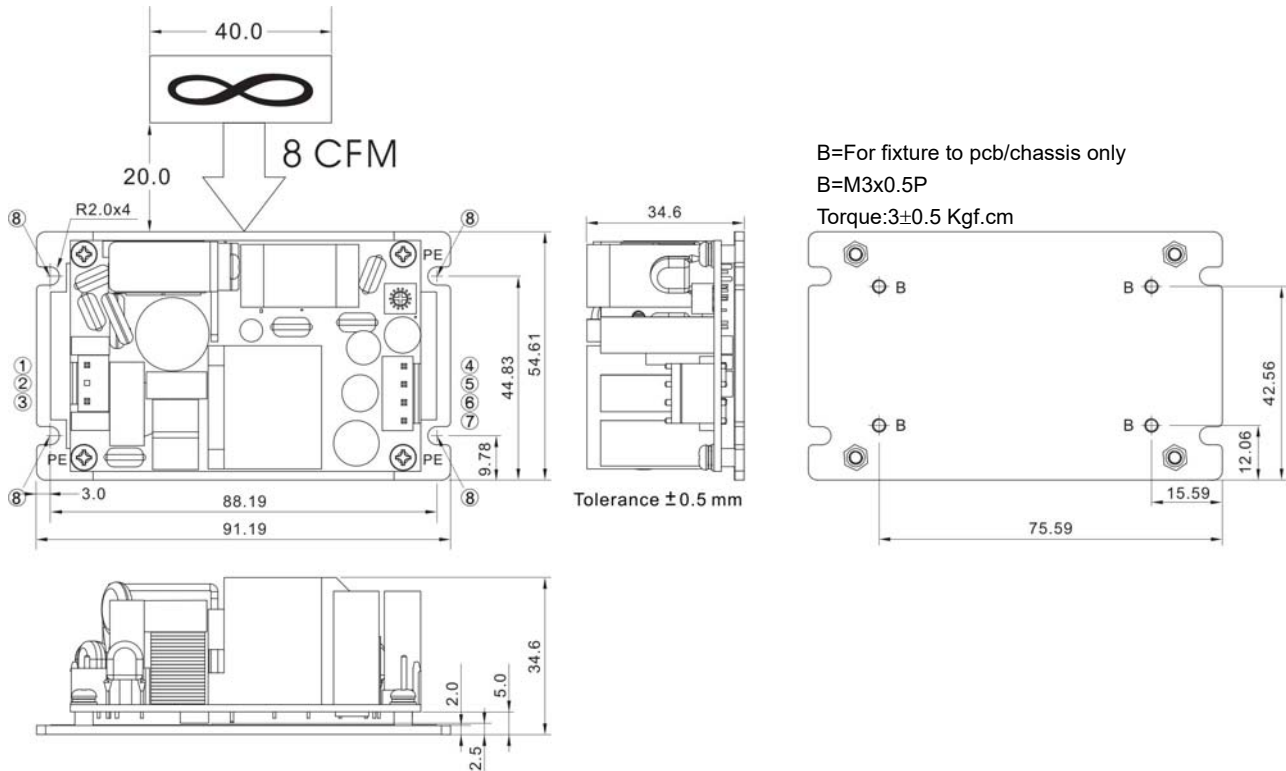
1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
2. Hold-up Time measured at 90% Vout.
3. Please check the derating curve for more details.
4. Strongly recommend to conduct this test with DC Voltage. If customer wishes to test with AC Voltage, please disconnect 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.)

**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

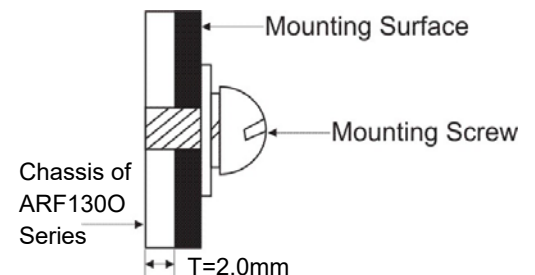
B=M3x0.5P

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