AC-DC ITE Switching Power Supply

ARF130E 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 +80°C Wide Range Operation Temperature
- Operating Altitude 5000M
- Active PFC Function
- I/O Isolation 4000VAC
- 3-Year Product Warranty

E199779

ELECTRICAL SPECIFICATIONS

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

Model No.			ARF130E-12S	ARF130E-24S	ARF130E-48S
Max Output Wattage (with 8CFM FAN) (W)			130 W		
Max Output Wattage (Conduction Cooling)		(Note 6)	130 W		
Max Output Wattage (Natural Convection)			105 W (100 VAC) / 119 W (115 VAC) / 119 W (230 VAC) /	110 W (100 VAC) / 120 W (115 VAC) / 120 W (230 VAC) /	115 W (100 VAC) / 125 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 (Conduction Cooling) (A) (max.)		10.833	5.417	2.708
	Current (Natural Convection) (A) (max.)	at 100 VAC	8.75	4.583	2.396
		at 115 VAC	9.917	5	2.604
		at 230 VAC	9.917	5	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		

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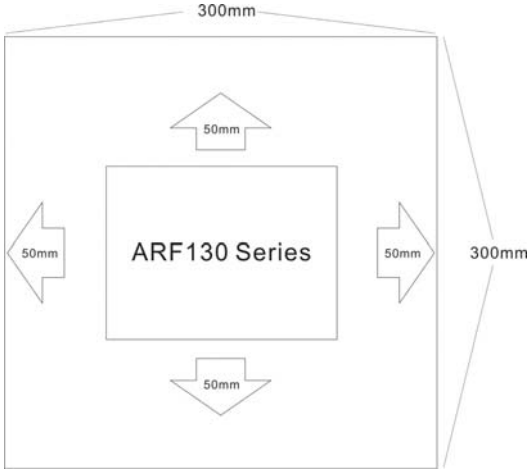
Model No.		ARF130E-12S	ARF130E-24S	ARF130E-48S
Environment	Operating Temperature	-30°C…+80°C (with derating)		
	Storage Temperature	-30°C…+80°C		
	Temperature Coefficient	±0.05%/°C		
	Altitude During Operation	5000m		
	Humidity	20~90% RH		
	MTBF	>400,000 h @ 25°C (MIL-HDBK-217F, Notice 1)		
	Vibration	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)	3.15 x 2.35 x 1.7 Inches (80.0 x 59.7 x 43.2 mm) Tolerance ±0.5 mm		
	Weight	292 g		
	Cooling Method	Natural Convection / Conduction Cooling / 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. And for optimizing thermal performance, 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.)

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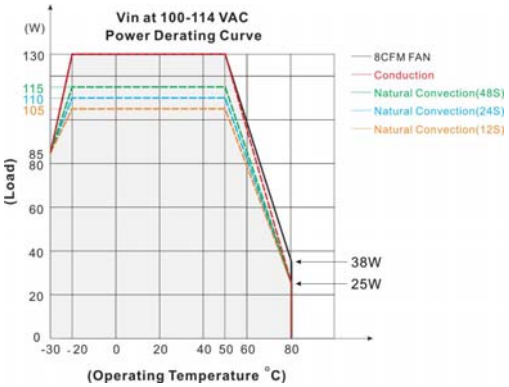
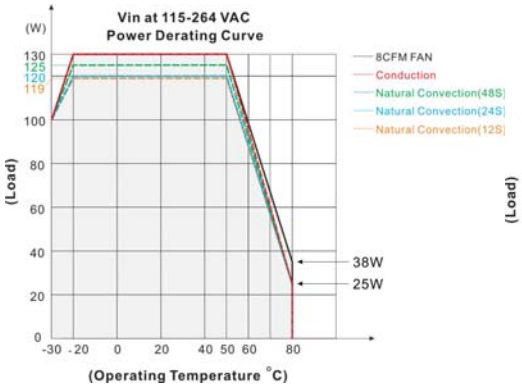
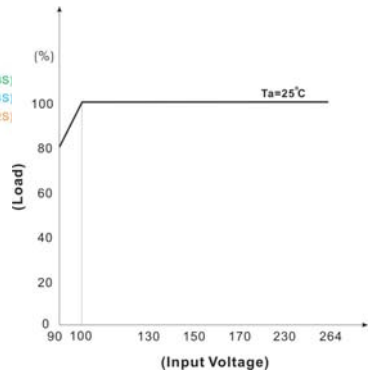
DERATING







If input voltage is lower than 100VAC, please refer to the output derating V.S. input voltage curve for details

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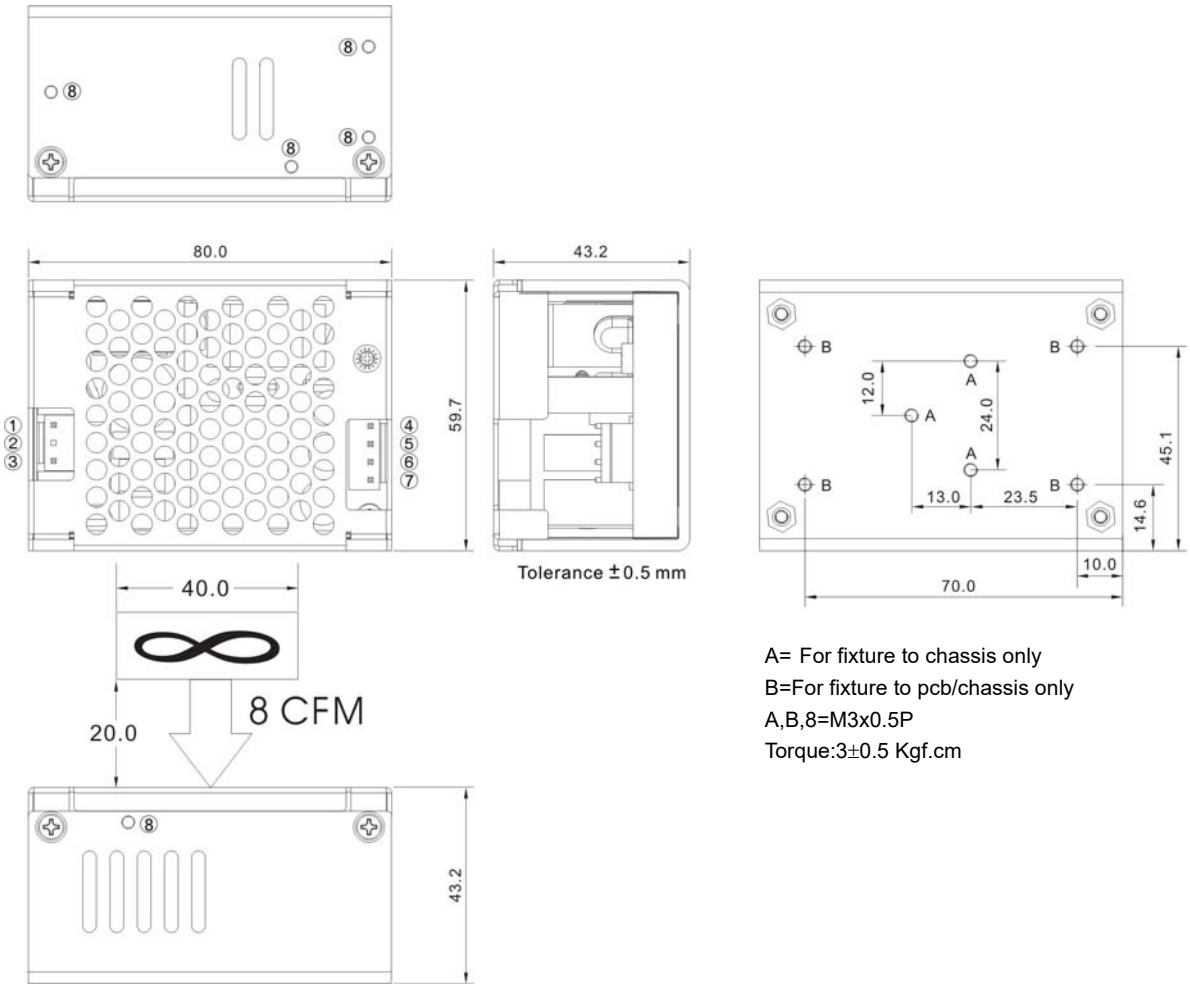
MECHANICAL DIMENSIONS (Top View)



A= For fixture to chassis only
B=For fixture to pcb/chassis only
A,B,8=M3x0.5P
Torque:3±0.5 Kgf.cm

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,B	PE	—	—	—	—

ASSEMBLY INSTRUCTIONS

*U Case T=2.5mm

Customer is advised to screw into the threads no more than 2.5mm