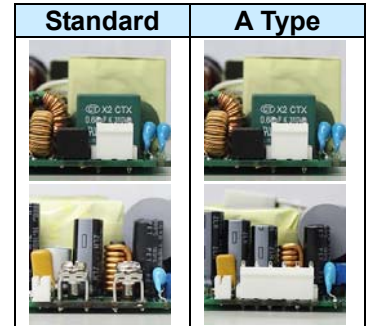


KEY FEATURES

- Universal Input 90-264Vac
- 240 Watt with 8CFM Forced Air
- 180W with Conduction Cooling
- 160 Watt with Natural Convection
- 150% Peak Load @3S
- High Efficiency up to 94%
- No Load Power Consumption<0.5W
- Over-Voltage Category OVC III
- Built-in 12V / 0.5A Fan Supply
- -30°C to +80°C Wide Range Operation Temperature
- Operating Altitude 5000M (OVC II)
- Active PFC Function
- I/O Isolation 4250VAC
- EMI for Both Class I (with PE) and Class II (without PE) Configuration
- Safety Approval to UL / IEC / EN 62368-1
- 3-Year Product Warranty



Please refer to the types of terminal block; the pictures shown are for illustration purpose only, actual product may vary.


ELECTRICAL SPECIFICATIONS

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

Model No.	ARFV2400-12S	ARFV2400-24S	ARFV2400-48S	
Max Output Wattage (with 8CFM FAN) (W)	240 W			
Max Output Wattage (Conduction Cooling) (W) (Note 6)	180 W			
Max Output Wattage (Natural Convection) (W)	160 W			
Input	Voltage (Note 3)	90-264 VAC		
	Frequency (Hz)	47-63 Hz		
	Current (Full load)	< 3.0 A max. (115 VAC) / < 1.5 A max. (230 VAC)		
	Inrush Current (<2ms)	< 45 A max. (115 VAC) / < 90 A max. (230 VAC)		
	Leakage Current	< 0.75mA / 264 VAC (Touch Current)		
	Power Factor	PF>0.9 at Full Load		
	No Load	< 0.5W (115 / 230 VAC)		
Output	Voltage (V.DC.)	12V	24V	48V
	Voltage Adj Range (V.DC.)	±5% Output Voltage		
	Voltage Accuracy	±2%		
	Current (with 8CFM FAN) (A) (max.)	20	10	5
	Current (Conduction Cooling) (A) (max.)	15	7.5	3.75
	Current (Natural Convection) (A) (max.)	13.33	6.66	3.33
	Line Regulation	±1%		
	Load Regulation (0-100%)	±1%		
	Minimum Load	0%		
	Maximum Capacitive Load	8000µF	3000µF	470µF
	Ripple & Noise (max.) (Note 1)	1% Vout		
	Efficiency (at 230VAC) (Note 5)	92.5%	93%	94%
	Hold-up Time (at 115 VAC) (Note 2)	10 ms min.		
Protection	Over Power Protection	Auto recovery(110-210%), Hiccup mode		
	Over Voltage Protection	Auto recovery		
	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)	4250VAC or 6000VDC		
	Input-PE (Note 4)	2830VAC or 4000VDC		
	Output-PE (Note 4)	1500VAC or 2121VDC		

ELECTRICAL SPECIFICATIONS

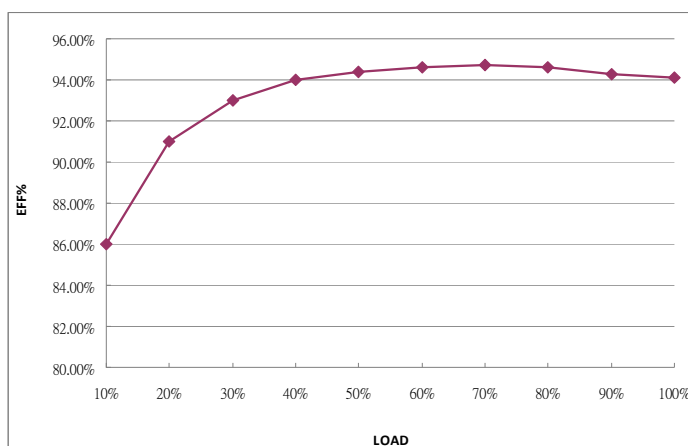
All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Model No.	ARFV2400-12S		ARFV2400-24S	ARFV2400-48S
Environment	Operating Temperature	-40°C...+80°C (with derating)		
	Storage Temperature	-40°C...+80°C		
	Temperature Coefficient	±0.05%/°C		
	Altitude During Operation	5000m (OVC II), 4000m (OVC III)		
	Humidity	20~90% RH		
	MTBF	>400,000 h @ 25°C (MIL-HDBK-217F, Notice 1)		
	Vibration	IEC60068-2-6 (10~500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes)		
	Shock	IEC60068-2-27 (Acceleration:75G ; pulse duration:11ms ; Filter:500Hz)		
Physical	Dimensions (L x W x H)	4.02 x 2.05 x 1.09 Inches (101.9 x 52.1 x 27.6 mm) Tolerance ±0.5 mm		
	Weight	220 g		
	Cooling Method	Natural Convection / Conduction Cooling / 8CFM FAN		
Safety	Approval	UL / IEC / EN 62368-1		
Parameter	Standards & Level	Performance		
EMI	Conducted (Note 7)	EN55032	Class B	
	Radiated (Note 7)	EN55032	Class I Class B / Class II Class A	
Harmonic	Harmonic currents	EN61000-3-2 (Full Load)	Class A	
EMS	EN 55035		A	
	ESD	IEC 61000-4-2 Air ± 15KV , Contact ± 8KV	A	
	RS	IEC 61000-4-3 3V/m	A	
	EFT/B	IEC 61000-4-4 ± 2KV , ± 4KV(L/N-PE)	A	
	Surge	IEC 61000-4-5 ± 2KV , ± 4KV(L/N-PE)	A	
	CS	IEC 61000-4-6 3Vrms	A	
	PFMF	IEC 61000-4-8 1A/m	A	

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.

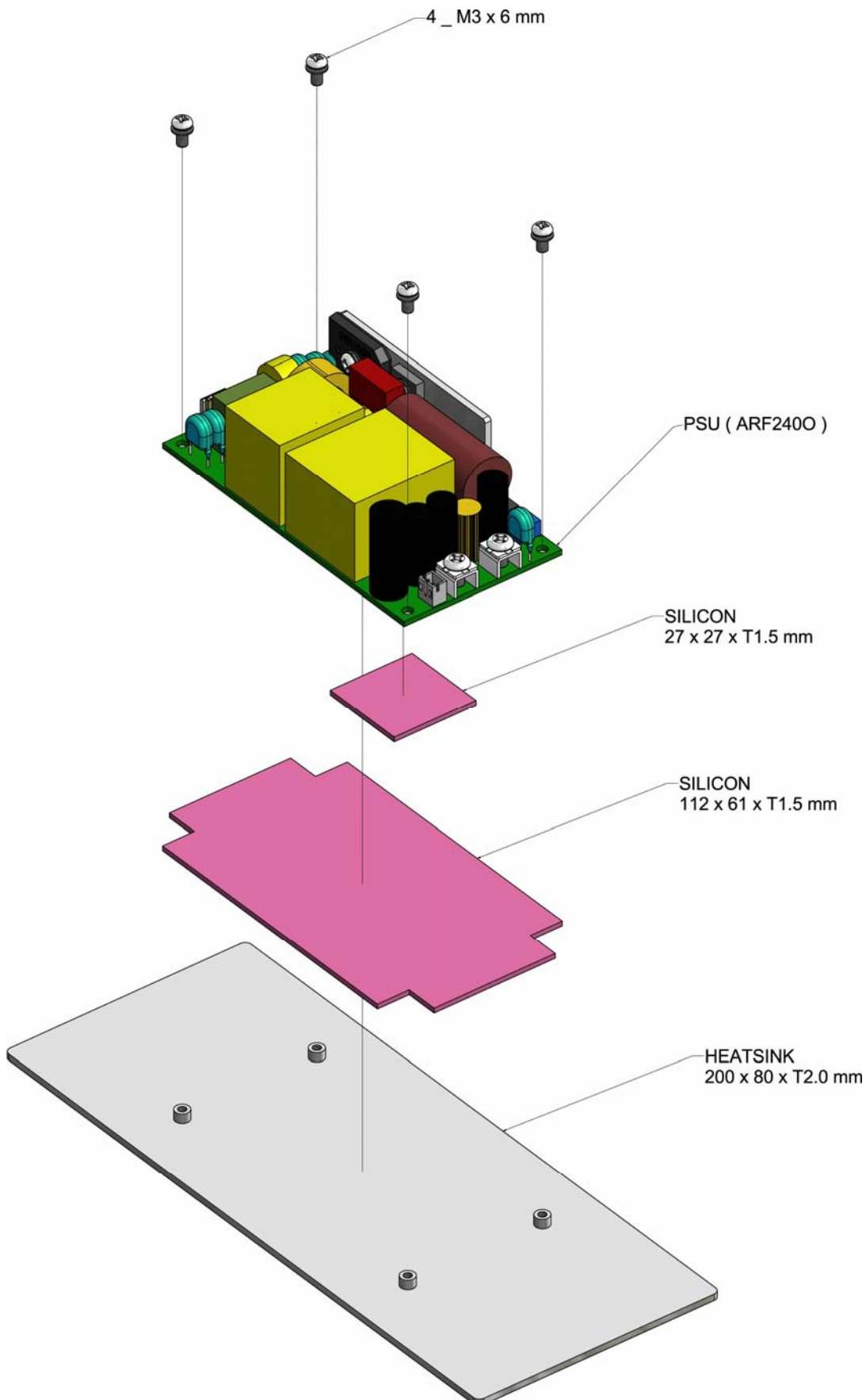
5. Vin at 230 VAC & 48 Vout



(After 30 minutes of burn-in)

NOTE

6.



NOTE

7. Considering that most casings of the system equipment are made of metal. The EMI test of the power supply is installed on the aluminum plate (600 x 450 x 3.0 mm) to simulate the end-product application.
8. Fan Supply=12V/0.5A (max) for driving a fan..
9. The FAN supply is designed to serve as the source of the additive external fan for the cooling of the power supply, enabling the full load delivery and assuring the best life span of the product. Please do not use this FAN supply to drive other devices.

For 12S, 24S, 48S			
Main Output Power	FAN Voltage (at 0.1A)	FAN Voltage (at 0.25A)	FAN Voltage (at 0.5A)
25%	12.1V	11.8V	11.5V
50%	12.2V	11.9V	11.7V
75%	12.3V	12.0V	11.8V
100%	12.5V	12.2V	11.9V

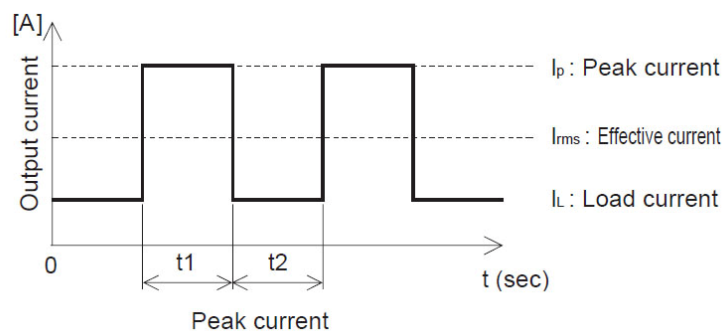
10. Please secure the power supply unit to your metal case by using the four screw holes in the corners for either Class I or Class II equipment

11. The peak current must meet the following conditions.

- (a) $t_1 \leq 3\text{sec}$
 (b) $60\text{sec} \leq t_1 + t_2$
 (c) $I_{\text{rms}} \leq \text{Rated current}$

(d)

$$I_{\text{rms}} = \sqrt{\frac{I_P^2 \times t_1 + I_L^2 \times t_2}{t_1 + t_2}}$$



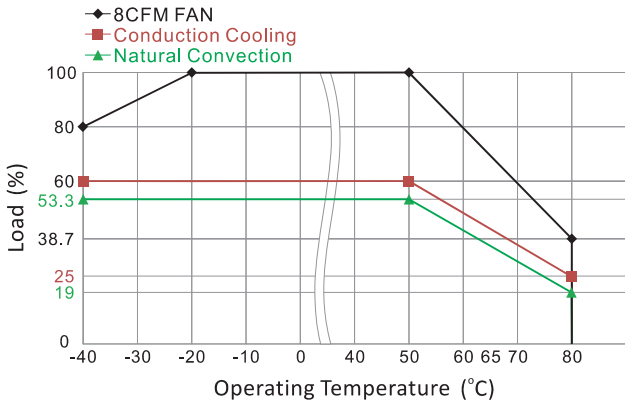
12. At least 15mm insulation distance on the bottom of the unit should be kept and a Mylar film should be added between the unit and the system.

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

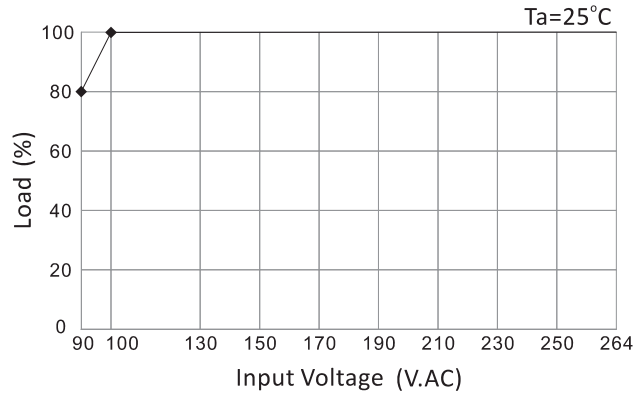
(ATTENTION : 2 poles avec fusible sur le neutre. Deconnecter le secteur avant intervention.)

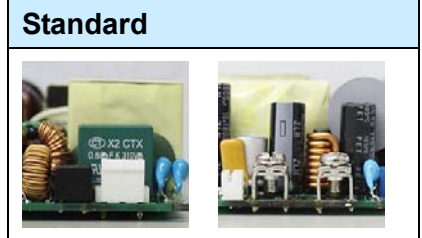
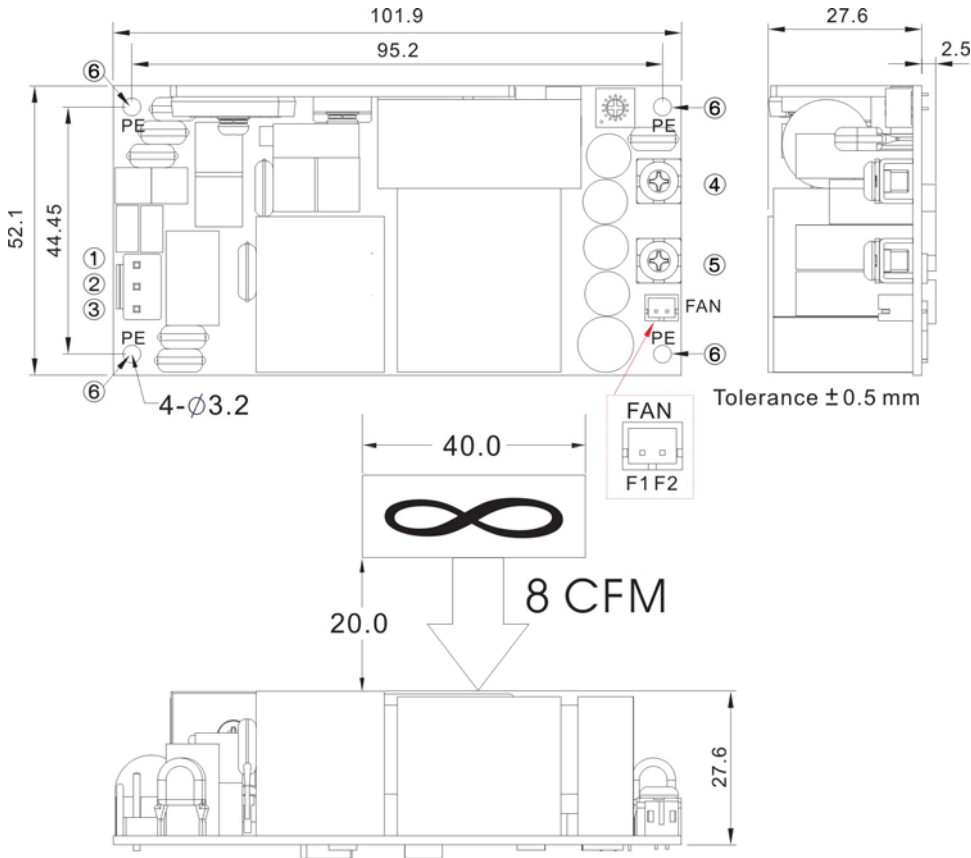
DERATING

Derating Output Load versus Operating Temperature



Derating Load versus Input Voltage

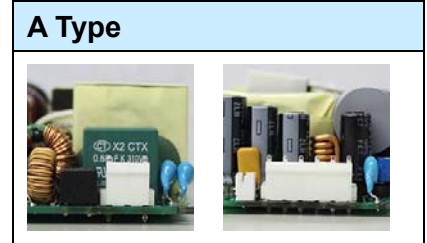
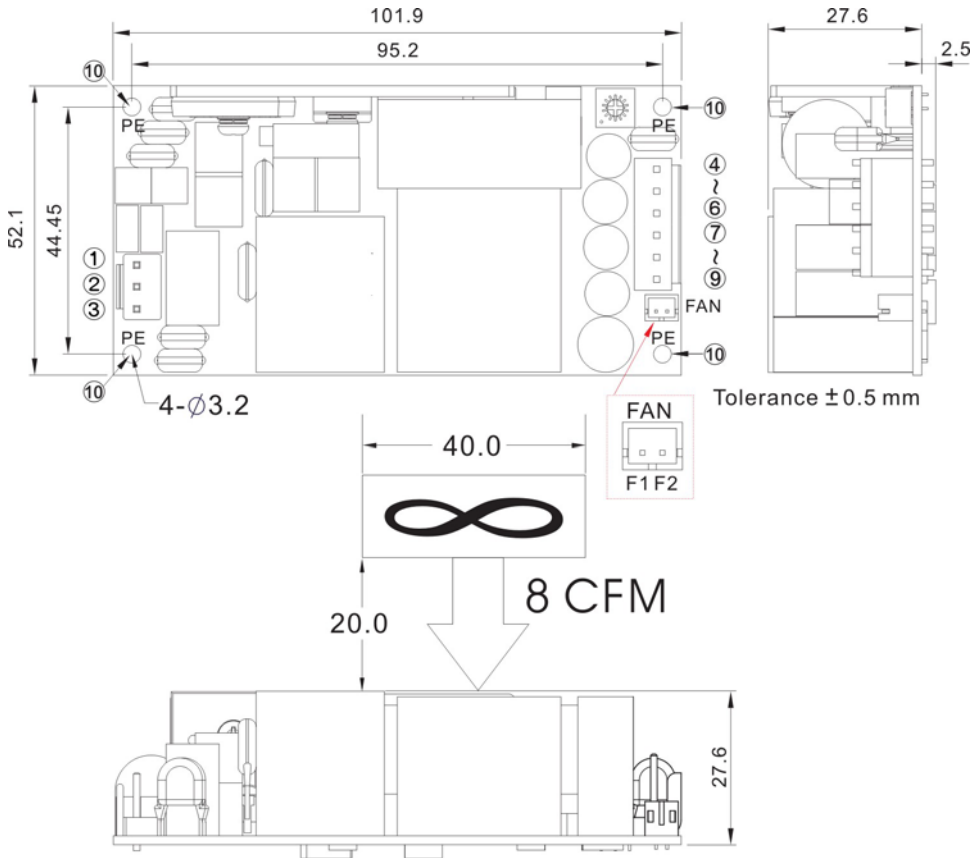


MECHANICAL DIMENSIONS (Top View)
Standard


Please refer to the types of terminal block; the pictures shown are for illustration purpose only, actual product may vary.

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	+DC OUT	Terminal : M3.5 Pan HD screw in 2 positions Torque to 8 lbs-in(90 cNm) max.			
5	-DC OUT				
6	PE	—	—	—	—

Connector Pin (FAN)					
Brands		Cherng Weei		JST	
PIN#	Single	Mating Housing	Terminal	Mating Housing	Terminal
F1	+AUX OUT	CX-H20-02	CP-T20B	PHR-2	SPH-002T-P0.5L
F2	-AUX OUT				

MECHANICAL DIMENSIONS (Top View)
A Type


Please refer to the types of terminal block; the pictures shown are for illustration purpose only, actual product may vary.

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)				
4~6	+DC OUT	9396-6	96T series	VHR-6N	SVH-41T-P1.1
7~9	-DC OUT				
10	PE	—	—	—	—

Connector Pin (FAN)					
Brands		Cherng Weei		JST	
PIN#	Single	Mating Housing	Terminal	Mating Housing	Terminal
F1	+AUX OUT	CX-H20-02	CP-T20B	PHR-2	SPH-002T-P0.5L
F2	-AUX OUT				