

KEY FEATURES

- Universal Input 90-264Vac
- High Efficiency up to 93%
- Operating Altitude 5000M
- Over-Voltage Category OVC III
- Standby 5V@1A with Fan
- Active PFC Function
- I/O Isolation 4250VAC
- Safety Approval to UL / IEC / EN 62368-1
- 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.		ARF1300F-12S	ARF1300F-24S	ARF1300F-48S	
Max Output Wattage (W) (Note 5)		1000 W (115 VAC) / 1100 W (230 VAC)	1300 W		
Input	Voltage (Note 5)	90-264 VAC			
	Frequency (Hz)	47-63 Hz			
	Current (Full load)	< 14 A max. (115 VAC) / < 7 A max. (230 VAC)			
	Inrush Current (<2ms) (Clod Start)	< 70 A max. (115 VAC) / < 105 A max. (230 VAC)			
	Leakage Current	< 1.5mA / 264 VAC (Touch Current)			
	Power Factor (at 230 VAC)	PF>0.9 at Full Load			
Output	Voltage (V.DC.)	12V	24V	48V	
	Voltage Adj Range (V.DC.)	±5% Output Voltage			
	Voltage Accuracy	±2%			
	Current (A) (max.)	at 115 VAC	83.4	54.1	27.1
		at 230 VAC	91.6	54.1	27.1
	Line Regulation (100-264 VAC)	±1%			
	Load Regulation (10-100%) (typ.)	±1%			
	Maximum Capacitive Load	7,000µF	3,500µF	1,750µF	
	Ripple & Noise (10-100%) (typ.) (Note 1)	160mV	1% Vout		
	Efficiency (at 230VAC)	90.5%	92.5%	93%	
Hold-up Time (at 115 VAC) (Note 2)	3ms min.				
Protection	Over Power Protection	Auto recovery			
	Over Voltage Protection	Auto recovery			
	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 3)	4250VAC or 6000VDC			
	Input-PE (Note 3)	2850VAC or 4000VDC			
	Output-PE (Note 3)	1500VAC or 2121VDC			
Function	5V Stand by	5VSB: 5V@1A with FAN ; Tolerance ±10%			
	DC OK Signal (Power Good)	Turn ON: 3.7~5.7V ; Turn OFF: 0~1V			
	Remote Control	+RC / -RC: Power ON=open ; Power OFF=short			

ELECTRICAL SPECIFICATIONS

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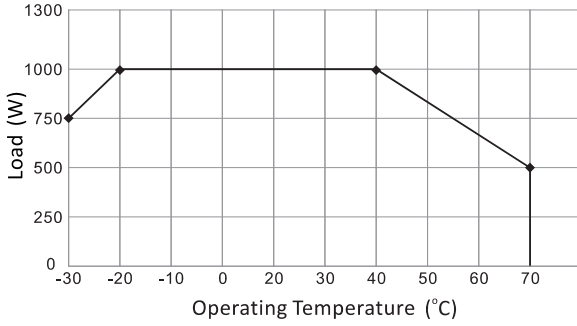
Model No.	ARF1300F-12S	ARF1300F-24S	ARF1300F-48S
Environment	Operating Temperature (Note 5,6)	-30°C...+70°C (with derating)	
	Storage Temperature	-30°C...+85°C	
	Temperature Coefficient	±0.03%/°C (0~50°C)	
		±0.06%/°C (Other)	
	Altitude During Operation	OVC II=5000m 、 OVC III=2000m	
	Humidity	95% RH	
	MTBF	>100,000 h @ 25°C (MIL-HDBK-217F)	
	Vibration	IEC60068-2-6 (10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes)	
	Shock	IEC60068-2-27	
	Dimension (L x W x H)	8.84 x 4.49 x 1.62 Inches (224.5 x 114.0 x 41.0) Tolerance ±0.5 mm	
	Weight	1450 g	
Approval	UL / IEC / EN 62368-1		
EMI	Conducted (Note 4)	EN55032 Class B	
	Radiated (Note 4)	EN55032 Class B	
EMS	EN 55035		
	ESD	IEC 61000-4-2 Air ± 15KV , Contact ± 8KV	A
	RS	IEC 61000-4-3 3V/m	A
	EFT/B	IEC 61000-4-4 ± 4KV	A
	Surge	IEC 61000-4-5 ± 4KV(L/N-PE)	A
	CS	IEC 61000-4-6 3Vrms	A
	PFMF	IEC 61000-4-8 1A/m	A
	Dips	IEC 61000-4-11 70% 500ms	A
	Interruptions	IEC 61000-4-11 <5% 5000ms	B

NOTE

- Ripple & Noise are measured at 20MHz of bandwidth by using a 6" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.
- Hold-up Time measured at 90% Vout.
- 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.
- For optimal EMI performance the power supply should be mounted to a grounded aluminium plate (650 x 650 x 3 mm) with electrical contact to the four PCB mounting holes. To comply with safety standards, this plate must be grounded.
- Please check the derating curve for more details.
- Due to varying customer application conditions, the product is tested for maximum operating temperature under full load only. For other regulatory requirements, please contact ARCH.
- CAUTION: Double pole, neutral fusing. Disconnect mains before servicing.
(ATTENTION : 2 poles avec fusible sur le neutre. Deconnecter le secteur avant intervention.)

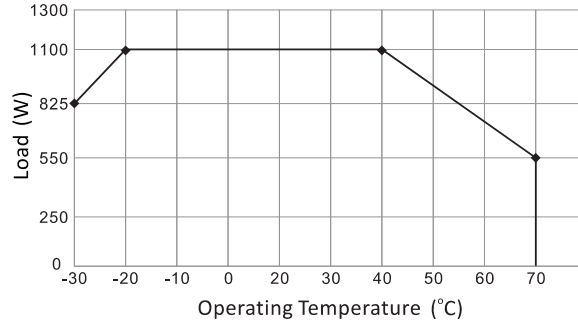
DERATING

Derating Output Load versus Operating Temperature
ARF1300F-12S at 115-197Vin

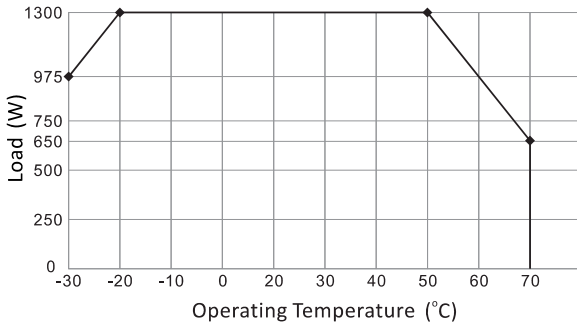


If input voltage is lower than 115VAC, please refer to the output derating V.S. input voltage curve for details

Derating Output Load versus Operating Temperature
ARF1300F-12S at 198-264Vin

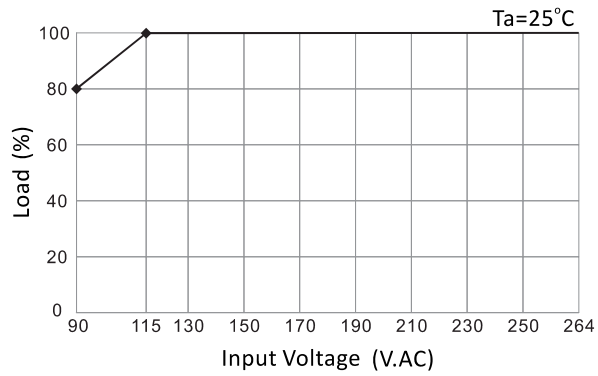


Derating Output Load versus Operating Temperature
ARF1300F-24S,48S

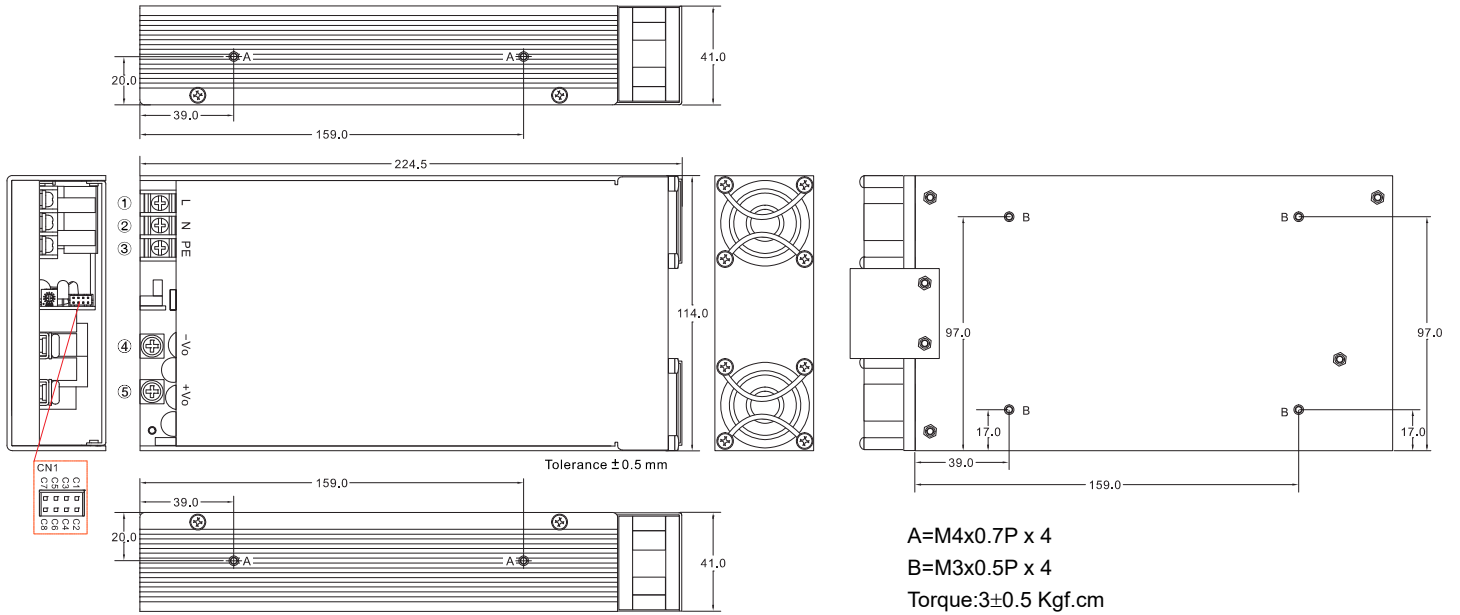


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Derating Load versus Input Voltage

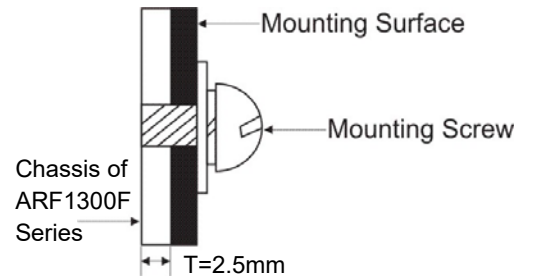


MECHANICAL DIMENSIONS (External View)



ASSEMBLY INSTRUCTIONS

*U Case T=2.5mm
 Customer is advised to screw into the threads no more than 2.5mm

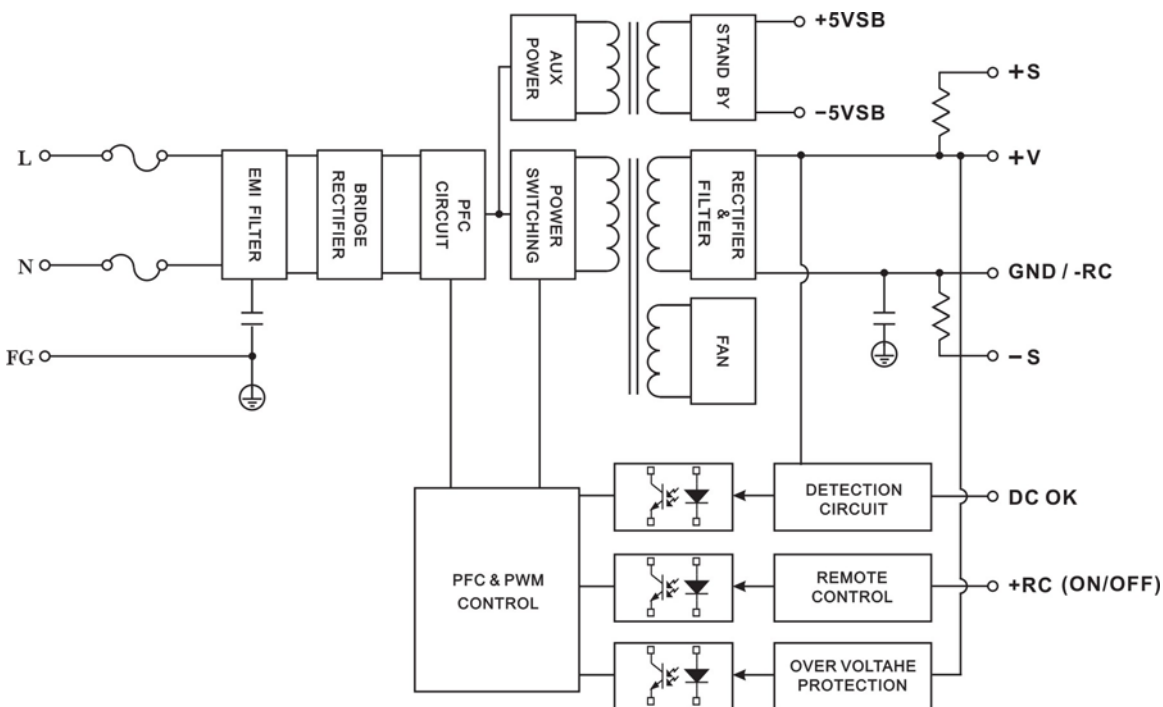
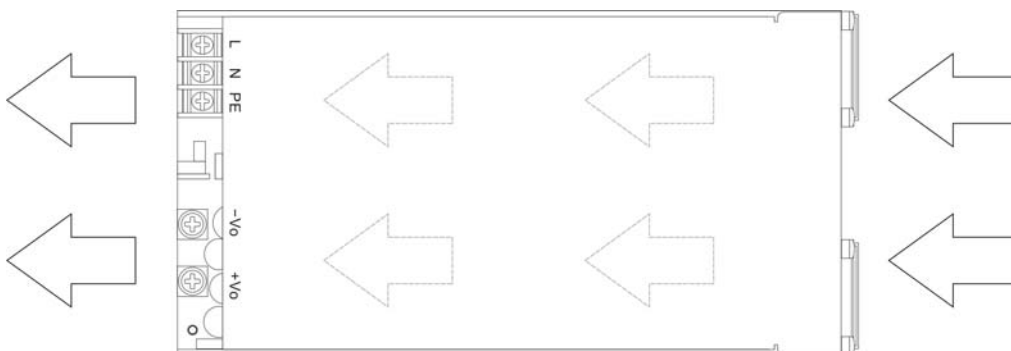


Brands		
PIN#	Single	Terminal
1	AC IN (L)	DINKLE DT-49-B01W-03
2	AC IN (N)	
3,A,B	PE	
4	-DC OUT	M5 Pan HD screw in 2 positions Torque to 8 lbs-in(90 cNm) max.
5	+DC OUT	

Connector Pin (CN1)					
Brands		Cherng Weei		JST	
PIN#	Single	Mating Housing	Terminal	Mating Housing	Terminal
C1	+S	PHD-H20-2X4P	PHD-T20	PHDR-08VS	SPHD-001T-P0.5
C2	-S				
C3	NC				
C4	-5V SB				
C5	GND / -RC				
C6	+RC				
C7	PG				
C8	+5V SB				

FUNCTION DESCRIPTION of CN1

Pin No.	Function	Description
C1	+S	Remote sensing (+)
C2	-S	Remote sensing (-)
C3	NC	
C4	-5V SB	This pin connects to the negative terminal(-V)
C5	GND / -RC	This pin connects to the negative terminal(-V). Return for DC-OK signal output.
C6	+RC	Turns the output on and off by electrical or dry contact between pin C5 (GND / -RC), Short: Power OFF, Open: Power ON.
C7	+PG	DC-OK Signal is a DC output. (DC-OK)
C8	+5V SB	Stand by voltage output ground 4.4~5.5V, referenced to pin C4 or C5(GND). The maximum load current is 1A.

BLOCK DIAGRAM

AIR FLOW DIRECTION


Specifications are subject to change without notice, E&OE. ALL PSU Terms & Conditions apply.

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