

KEY FEATURES

- Enclosed ITE Switching Power Supply
- I/O Isolation 4300VAC
- 5000m Altitude Application (OVC III:2000m)
- Over-Voltage Category OVC III
- Remote ON/OFF Function
- Standby 5V@1A
- High Efficiency up to 92%
- With P.F.C. Function >0.9
- Current Share Function
- Ultra Compact Size: 7.6 x 4.02 x 1.62 Inches
- 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.	AQF1000C-12S	AQF1000C-24S	AQF1000C-48S	
Max Output Wattage (W)	800W	1000W		
Input	Voltage (Note 6)	90-264 VAC		
	Frequency (Hz)	50-60 Hz		
	Current (Full load)	< 11 A max. (115 VAC) / < 5.5 A max. (230 VAC)		
	Inrush Current (<2ms) (Cold Start)	< 70 A max. (115 VAC) / < 105 A max. (230 VAC)		
	Leakage Current	< 0.75 mA max. (264 VAC)		
	Power Factor (at 230 VAC)	PF>0.9 at Full Load		
Output	Voltage (V.DC.)	12V	24V	48V
	Voltage Accuracy	±2%		
	Voltage Adj. Range (V.DC)	±5% Output Voltage		
	Current (A) (max.)	66.67	41.67	20.84
	Line Regulation (115-264 VAC)	±0.5%		
	Load Regulation (10-100%) (typ.)	±1%		
	Maximum Capacitive Load	7000 uF	3500 uF	1750 uF
	Ripple & Noise (typ.)	160mV	240mV	480 mV
	Efficiency (at 230 VAC)	89%	92%	92%
Hold-up Time (at 115 VAC)	3 ms min.			
Protection	Over Power Protection	Auto recovery		
	Over Voltage Protection	Auto recovery		
	Over Temperature Protection	Auto recovery		
	Short Circuit Protection	Auto recovery		
Isolation	Input-Output (V.AC)	4300VAC or 6000VDC		
	Input-PE (V.AC)	2000V		
	Output-PE (V.AC)	1500V		
Function	5V Stand by	5VSB: 5V@1A; 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		
	Current Share	Please refer to note 4.		

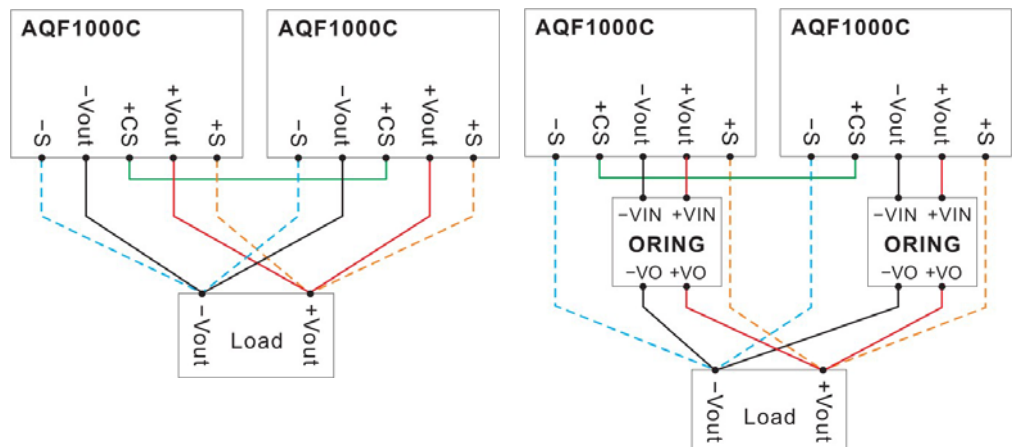
ELECTRICAL SPECIFICATIONS

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

Model No.	AQF1000C-12S	AQF1000C-24S	AQF1000C-48S
Environment	Operating Temperature	-20°C...+70°C (with derating)	
	Storage Temperature	-35°C...+85°C	
	Temperature Coefficient	±0.03%/°C (0~50°C)	
		±0.06%/°C (-30~0°C)	
	Altitude During Operation	OVC II=5000m · OVC III=2000m	
	Humidity	95% RH	
	Atmospheric Pressure	56 kPa to 106 kPa	
	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		
Physical	Dimensions (L x W x H)	AQF1000C : 7.6 x 4.02 x 1.62 Inches (193.0 x 102.0 x 41.0 mm) Tolerance ±0.5 mm	
		ORING : 3.15 x 2.35 x 1.5 Inches (80.0 x 59.7 x 38.0 mm) Tolerance ±0.5 mm	
	Weight	AQF1000C : 950 g / ORING : 115 g	
Safety	Approval	UL / IEC / EN 62368-1 (In Progress)	
EMC	Conducted and Radiated EMI	EN55032 (conducted class B, Radiated Class A) FCC Part 15 (In Progress)	
	EMS	EN55035 (In Progress)	

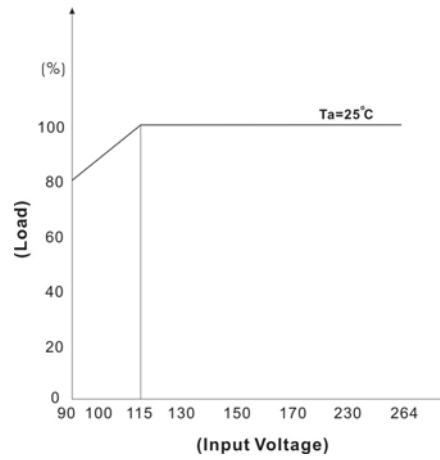
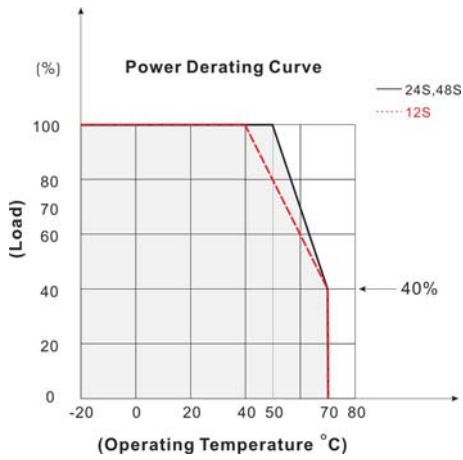
NOTE

- 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.
- Current Share:
 - Adjust the build-in potentiometer on each unit before connecting for current share, make sure that the output voltage difference of each unit is less than 0.2V.
 - Output power at parallel operation = rated power per unit x number of unit x 90%
 - Connect in parallel no more than 2 units. Please contact ARCH for advice if more than 2 is needed.
 - Minimum Load Should be 15%.

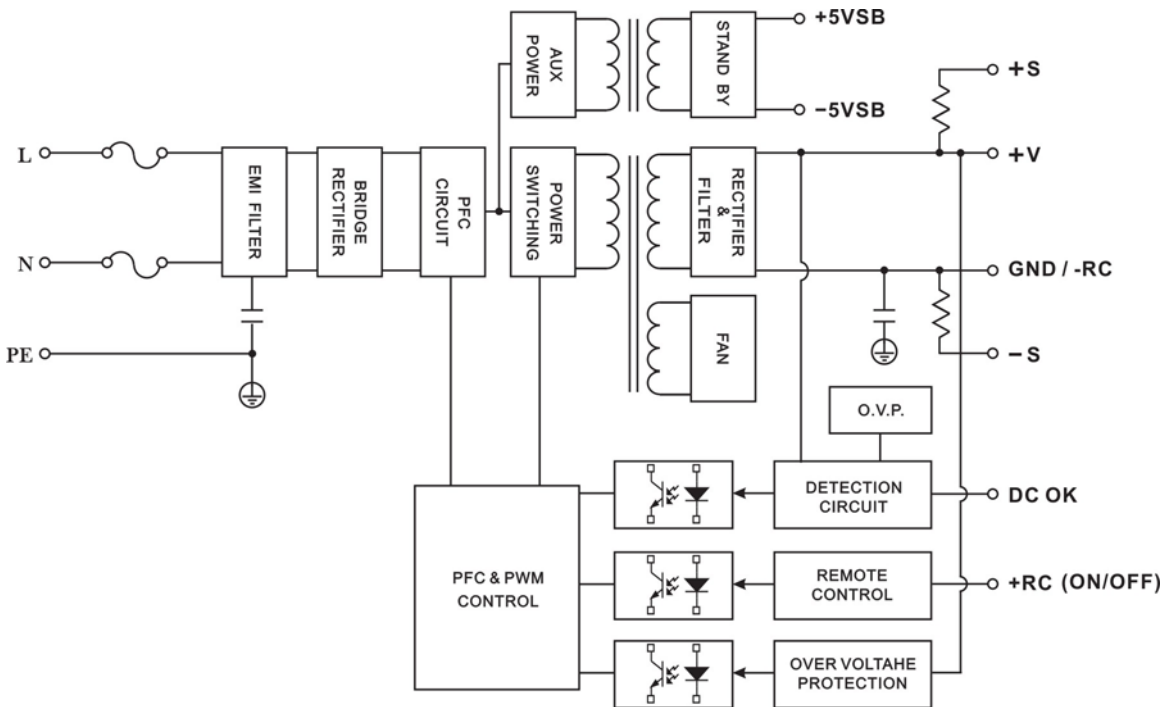


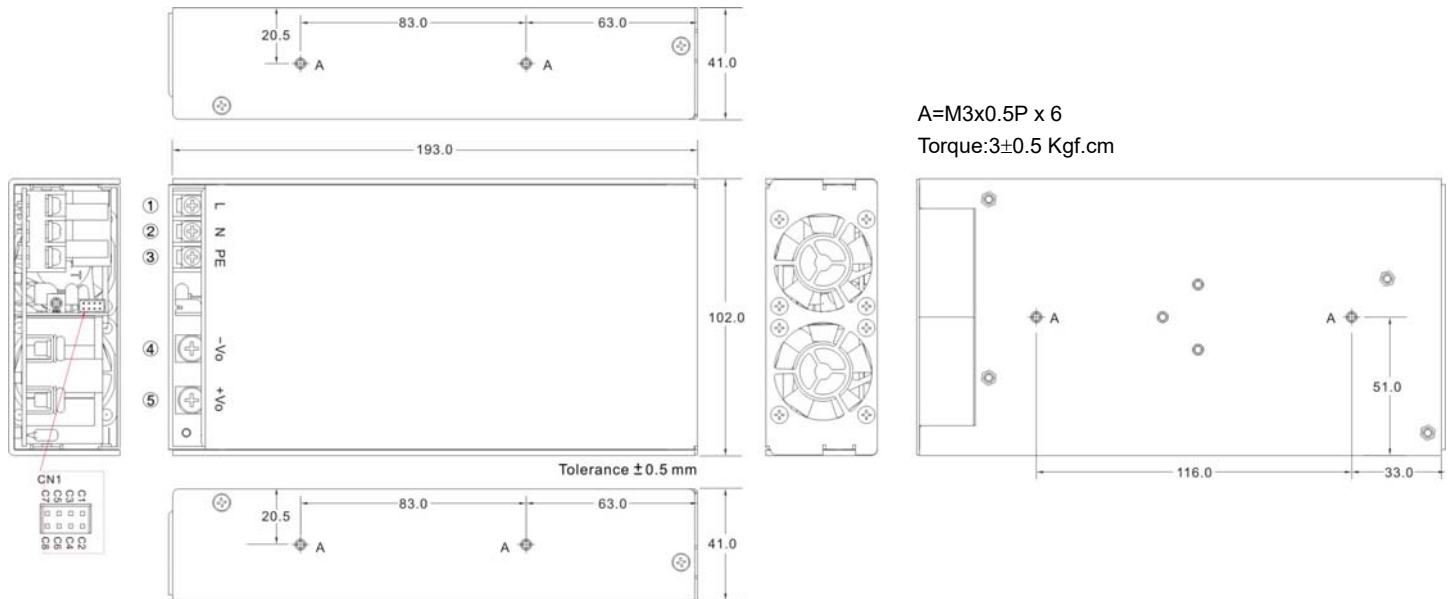
- CAUTION: Double pole, neutral fusing. Disconnect mains before servicing.
(ATTENTION : 2 poles avec fusible sur le neutre. Deconnecter le secteur avant intervention.)
- Please check the derating curve for more details.

DERATING



BLOCK DIAGRAM



MECHANICAL DIMENSIONS (Top View)


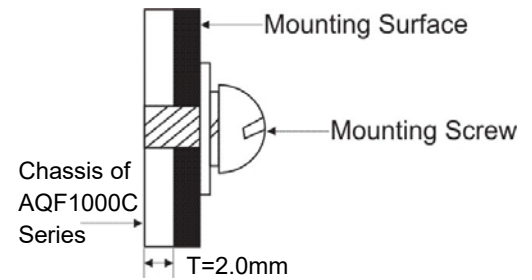
A=M3x0.5P x 6
Torque:3±0.5 Kgf.cm

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

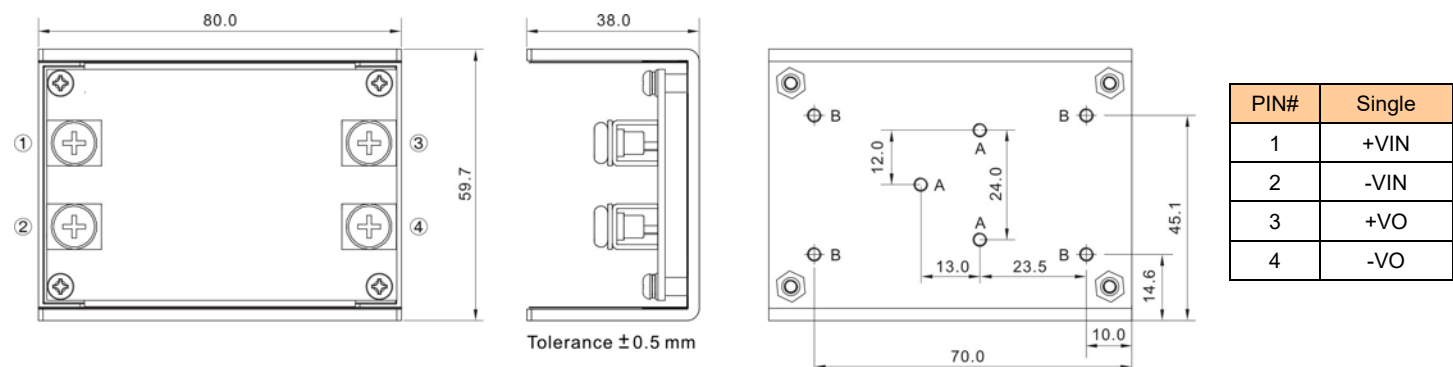
ASSEMBLY INSTRUCTIONS

*U Case T=2.0mm

Customer is advised to screw into the threads no more than 2.0mm

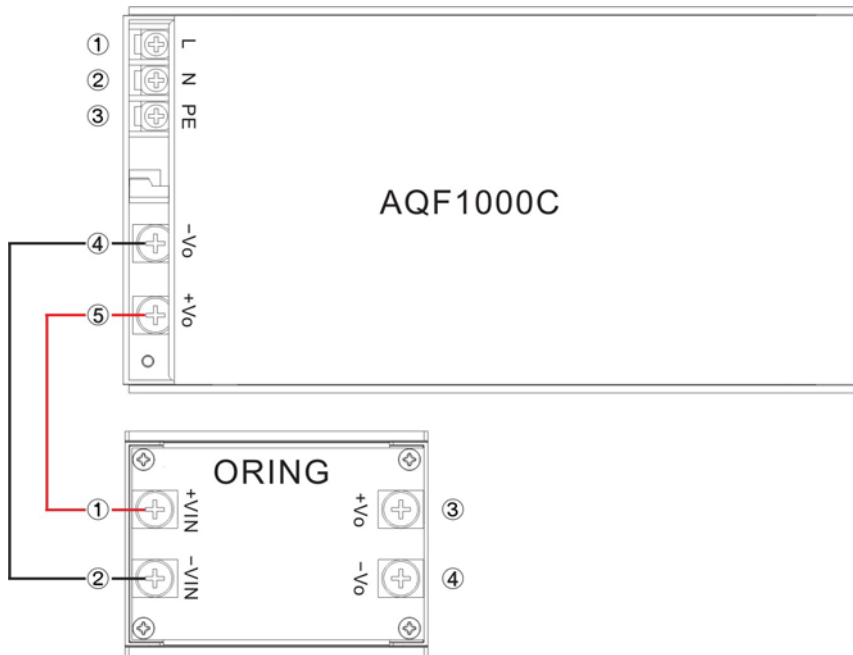


Connector Pin (CN1)					
Brands		Cherng Weei		JST	
PIN#	Single	Mating Housing	Terminal	Mating Housing	Terminal
C1	+S	PHD-H20-2X4P	PHD-T20	PHDR-08VS	SPHD-001T-P0.5
C2	-S				
C3	CS				
C4	-5V SB				
C5	GND / -RC				
C6	+RC				
C7	PG				
C8	+5V SB				

ORING


PIN#	Single
1	+VIN
2	-VIN
3	+VO
4	-VO

HOW TO ATTACH ORING BOARD to AQF1000C SERIES



FUNCTION DESCRIPITON of CN1

Pin No.	Function	Description
C1	+S	Positive Sense Pin (+Sense pin).
C2	-S	Negative Sense Pin (-Sense pin).
C3	NC / CS	NC: Not Connected for Non-Current Share models. CS: Current Share pin for Current Share Models.
C4	-5V SB	This pin connects to the negative output terminal -Vout. It also connects to the return for DC-OK signal.
C5	GND / -RC	This pin connects to the negative output terminal(-Vout). It also connects to the return for DC-OK signal output.
C6	+RC	Turns the output on and off by electrical or dry contact between this pin (C6) and 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.

AIR FLOW DIRECTION

