

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
- 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.		AQF1000-12S	AQF1000-24S	AQF1000-48S
Max Output Wattage (W)		800W	1000W	
Input	Voltage (Note 5)	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%		
	Current (A) (max.)	66.67	41.67	20.84
	Line Regulation (115-264 VAC)	±0.5%		
	Load Regulation (10-100%) (typ.)	±2%		
	Maximum Capacitive Load	7000 uF	3500 uF	1750 uF
	Ripple & Noise (typ.) (10-100%)	160mV	240mV	480 mV
	Efficiency (at 230 VAC)	89%	92%	92%
Protection	Hold-up Time (at 115 VAC)	3 ms min.		
	Over Power Protection	Auto recovery		
	Over Voltage Protection	Auto recovery		
	Over Temperature Protection	Auto recovery		
Isolation	Short Circuit Protection	Auto recovery		
	Input-Output (V.AC)	4300VAC or 6000VDC		
	Input-PE (V.AC)	2000V		
Function	Output-PE (V.AC)	1500V		
	5V Stand by	5VSB: 5V@1A ; Tolerance ±10%		
	DC OK Signal (Power Good)	Turn ON: 3.7~5.7V ; Turn OFF: 0~1V		
Environment	Remote Control	+RC / -RC: Power ON=open ; Power OFF=short		
	Operating Temperature (Note 4)	-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)		
Shock	Vibration	IEC60068-2-6 (10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes)		
	Shock	IEC60068-2-27		

ELECTRICAL SPECIFICATIONS

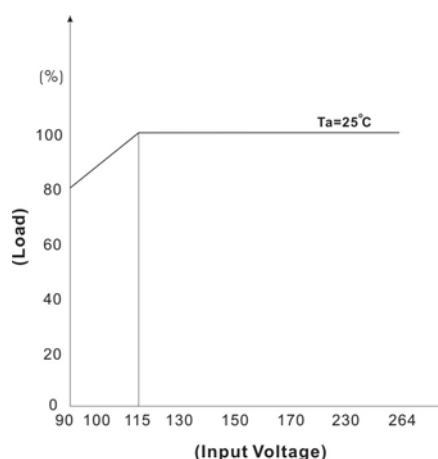
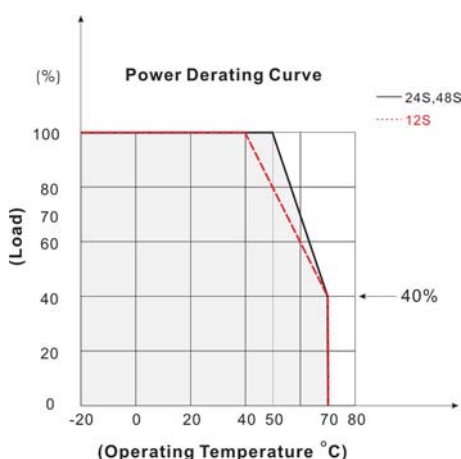
All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Model No.		AQF1000-12S	AQF1000-24S	AQF1000-48S
Physical	Dimensions (L x W x H)	7.6 x 4.02 x 1.62 Inches (193.0 x 102.0 x 41.0 mm) Tolerance ±0.5 mm		
	Weight	970 g		
Safety	Approval	UL / IEC / EN 62368-1		
Parameter	Standards & Level			Performance
EMI (Note 5)	Conducted	EN55032		Class B (In Progress)
	Radiated	EN55032		Class B (In Progress)
EMS	EN 55035			A (In Progress)
	ESD	IEC 61000-4-2 Air ± 15KV , Contact ± 8KV		A (In Progress)
	RS	IEC 61000-4-3 3V/m		A (In Progress)
	EFT/B	IEC 61000-4-4 ± 4KV		A (In Progress)
	Surge	IEC 61000-4-5 ± 4KV(L/N-PE)		A (In Progress)
	CS	IEC 61000-4-6 3Vrms		A (In Progress)
	PFMF	IEC 61000-4-8 1A/m		A (In Progress)
	Dips	IEC 61000-4-11 70% 500ms		A (In Progress)
	Interruptions	IEC 61000-4-11 <5% 5000ms		B (In Progress)

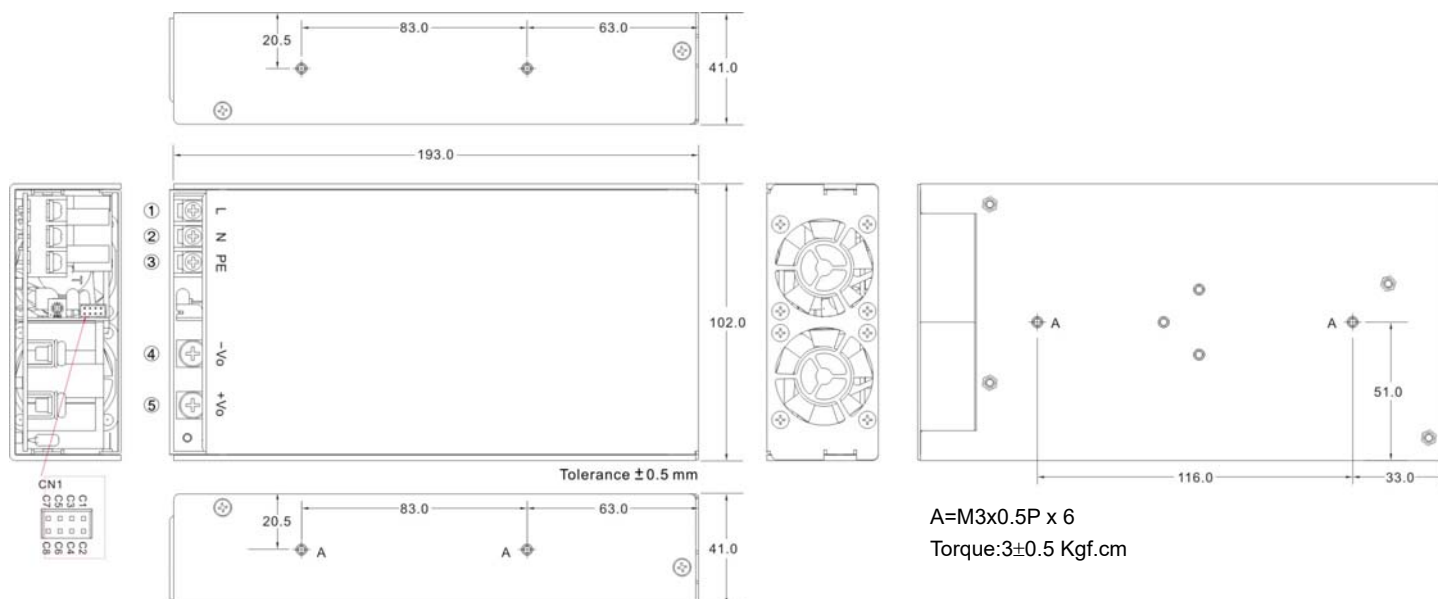
NOTE

- 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.
- 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.
- 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.
- 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



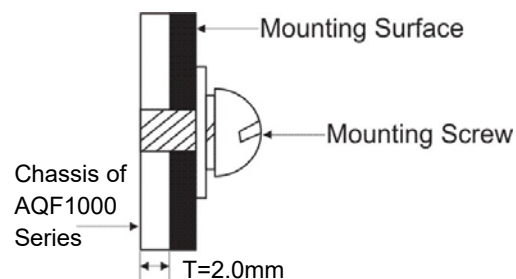
MECHANICAL DIMENSIONS (External View)



ASSEMBLY INSTRUCTIONS

*U Case T=2.0mm

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



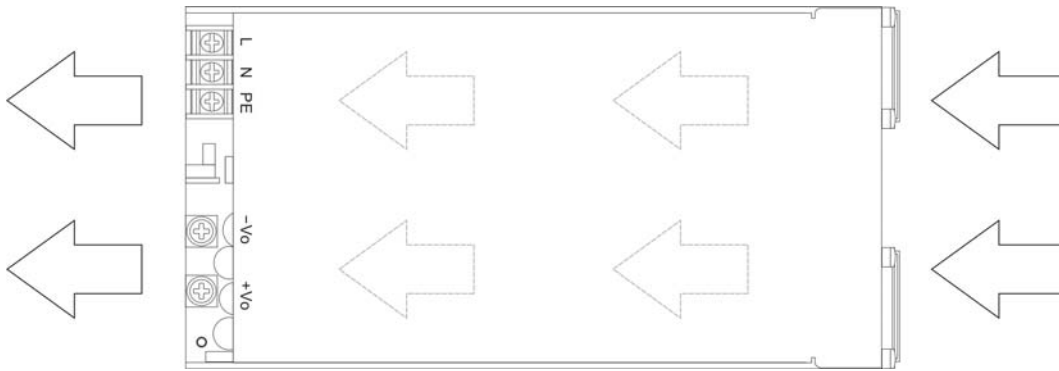
Brands		
PIN#	Single	Terminal
1	AC IN (L)	DINKLE DT-49-B01W-03
2	AC IN (N)	
3,A	PE	
4	-DC OUT	M5 Pan HD screw in 2 positions Torque to 8 lbs-in(90 cNm) max.
5	+DC OUT	

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 DESCRIPITON 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.

AIR FLOW DIRECTION



BLOCK DIAGRAM

