

AQF1000 Series

AC/DC Industrial Power Supplies 1000W 12V 24V 48V



KEY FEATURES

- Enclosed ITE Switching Power Supply
- I/O Isolation 4300VAC
- 5000m Altitude Application (OVC III:2000m)
- Over-Voltage Category OVC III (New Edition)
- Remote ON/OFF Function
- Standby 5V@1A
- High Efficiency up to 93%
- With P.F.C. Function >0.9
- Ultra Compact Size: 7.66 x 4.02 x 1.62 Inches
- Safety Approval to UL / IEC / EN 62368-1



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	< 0.1 mA max. (Input-Output)		
	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%		
	Minimum Load	1%		
	Maximum Capacitive Load	7000 uF	3500 uF	1750 uF
	Ripple & Noise (typ.)	160mV	240mV	480 mV
	Efficiency (at 230 VAC)	89%	92%	93%
	Hold-up Time (at 115 VAC)	5 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		
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		

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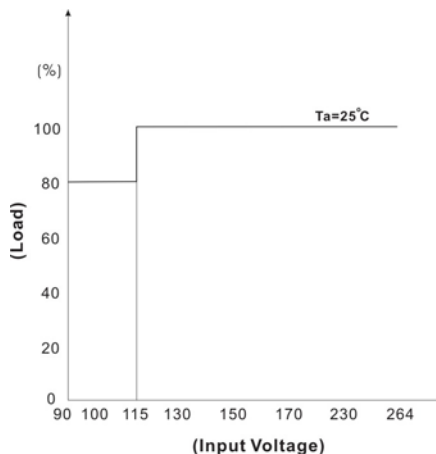
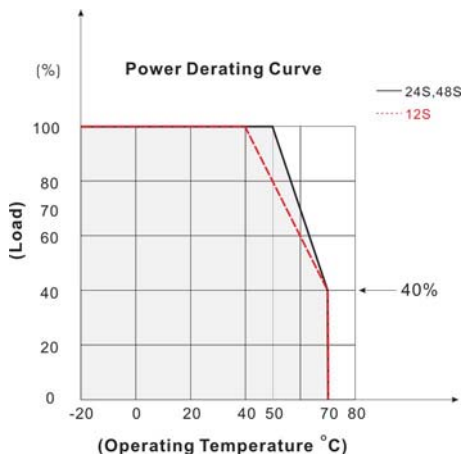
All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Model No.		AQF1000-12S	AQF1000-24S	AQF1000-48S
Physical	Dimensions (L x W x H)	7.66 x 4.02 x 1.62 Inches (194.5 x 102.0 x 41.0 mm) Tolerance ± 0.5 mm		
	Weight	950 g		
Safety	Approval	UL / IEC / EN 62368-1		
EMC	Conducted and Radiated EMI	EN55032 (conducted class B, Radiated Class A)		
	EMS	EN55035		

NOTE

1. Ripple & Noise are measured at 20MHz of bandwidth by using a 6" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.
2. Hold-up Time measured at 90% Vout.
3. 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.
4. **CAUTION: Double pole, neutral fusing. Disconnect mains before servicing.**
(ATTENTION : 2 poles avec fusible sur le neutre. Deconnecter le secteur avant intervention.)
5. Please check the derating curve for more details.

DERATING

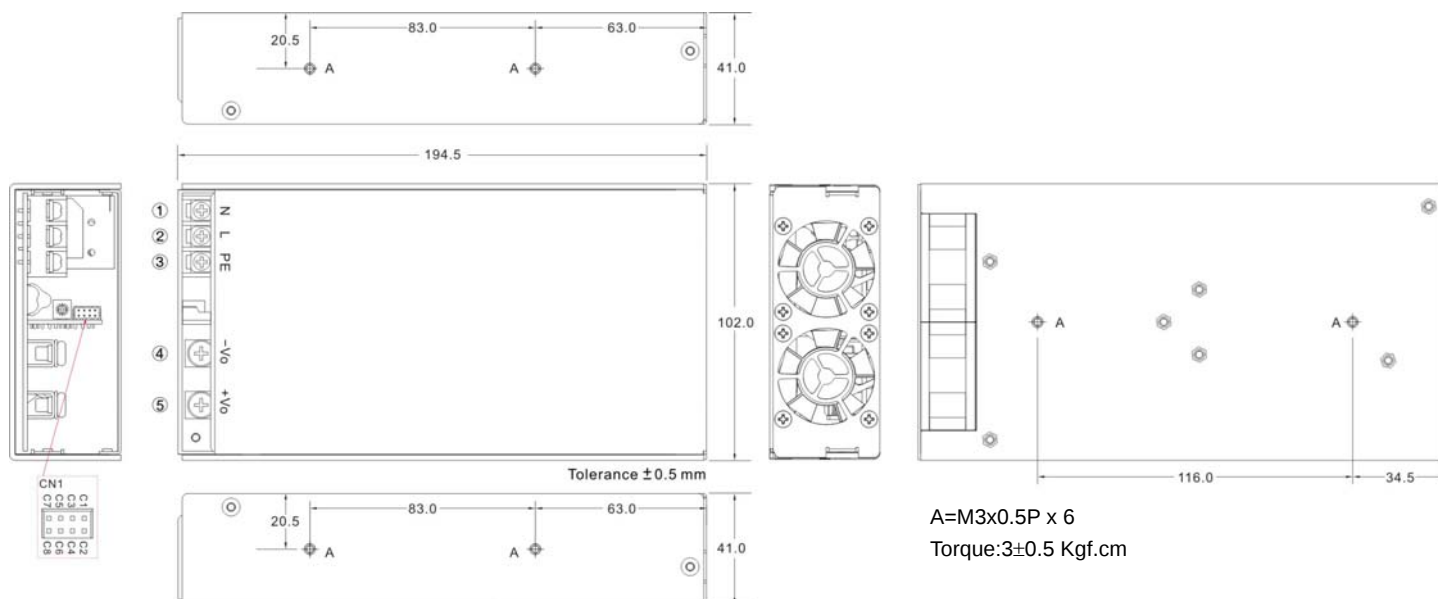


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MECHANICAL DIMENSIONS (External View)



Brands		
PIN#	Single	Terminal
1	AC IN (N)	DINKLE DT-49-B01W-03
2	AC IN (L)	
3	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				

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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.

BLOCK DIAGRAM

