

# ARCH AQF120U AC-DC Switching Power Supply Datasheet

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## KEY FEATURES

U Bracket Switching Power Supply

180 Watt with 18CFM FAN for 12V to 48V Output Voltage

180 Watt with 30CFM FAN for 5V Output Voltage

High Efficiency up to 93%

Universal Input: 90-264 VAC

Low Ripple and Noise

With P.F.C. Function >0.95

120 Watt with Free Air Convection

Ultra Compact Size: 5.0 x 3.24 x 1.5 Inches

3-Years Product Warranty

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## KEY FEATURES

- U Bracket Switching Power Supply
- High Efficiency up to 92%
- Universal Input: 90-264 VAC
- 12 VDC to 48 VDC Single Output
- With P.F.C. Function
- Free Air Convection
- Ultra Compact Size: 5.0 x 3.24 x 1.5 Inches
- 3-Years Product Warranty



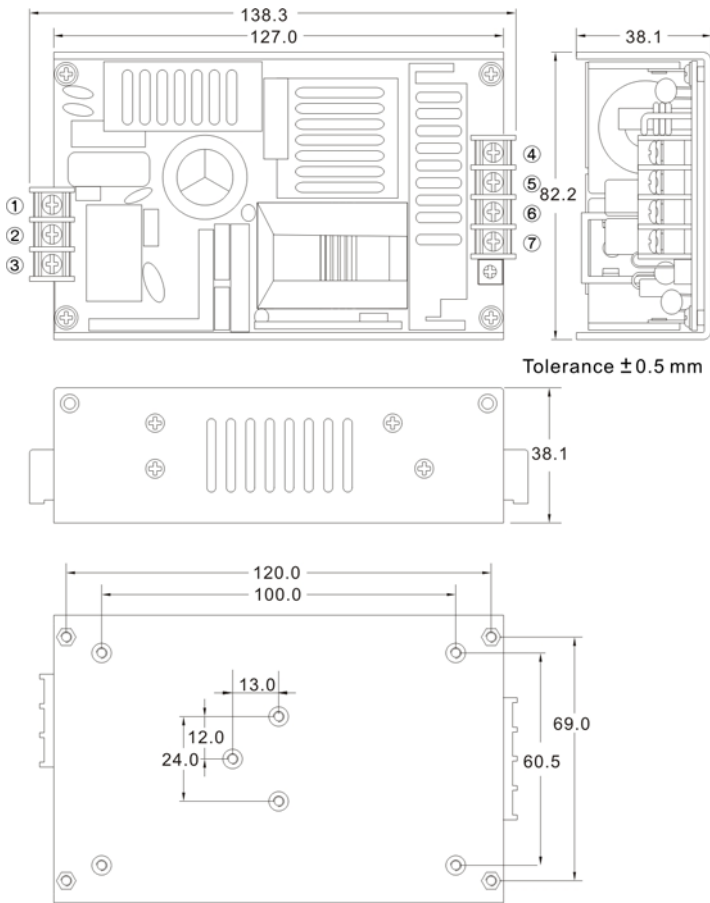
## ELECTRICAL SPECIFICATIONS

Model No.	AQF120U-12S	AQF120U-24S	AQF120U-48S	
Max Output Wattage (W)	120W			
Input	Voltage	90-264 VAC or 120-370 VDC		
	Frequency (Hz)	47-63 Hz		
	Current (Full load)	<2.0 A max. (115 VAC) / <1.0 A max. (230 VAC)		
	Inrush Current (<2ms)	< 30 A max. (115 VAC) / < 60 A max. (230 VAC)		
	Leakage Current	< 0.5 mA max.		
	Power Factor	PF>0.98 (115 VAC) / PF>0.94 (230 VAC) at Full Load		
Output	Voltage (V.DC.)	12V	24V	48V
	Voltage Accuracy	±2%		
	Current (A) max	10	5	2.5
	Line Regulation	±1%		
	Load Regulation	±1%		
	Minimum Load	1%		
	Maximum Capacitive Load	470-23,000µF depending on model		
	Ripple & Noise	1% max.		
	Efficiency (typ.)	90%	91%	92%
	Hold-up Time	12 ms min.		
	Switching Frequency	100 kHz		
Protection	Over Power Protection	Auto recovery		
	Over Voltage Protection	Latch Off		
	Short Circuit Protection	Latch Off		
Isolation	Input-Output (V.AC)	4000V		
	Input-FG (V.AC)	2000V		
	Output-FG (V.AC)	500V		
Environment	Operating Temperature	-10°C...+70°C (with derating)		
	Storage Temperature	-25°C...+85°C		
	Temperature Coefficient	±0.03%/°C ( 0~50°C )		
	Humidity	95% RH		
	MTBF	>120,000 h @ 25°C (MIL-HDBK-217F)		
	Vibration	10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes.		
Physical	Dimension (L x W x H)	5.0 x 3.24 x 1.5 Inches (127.0 x 82.2 x 38.1 mm ) Tolerance ±0.5 mm		
	Weight	382 g		
	Cooling Method	Free convection		
Safety	Agency Approvals	CE, UL60950, CB		
EMC	EMI (Conducted & Radiated Emission)	EN 55022 class B		
	EMS (Noise Immunity)	EN 55024		

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

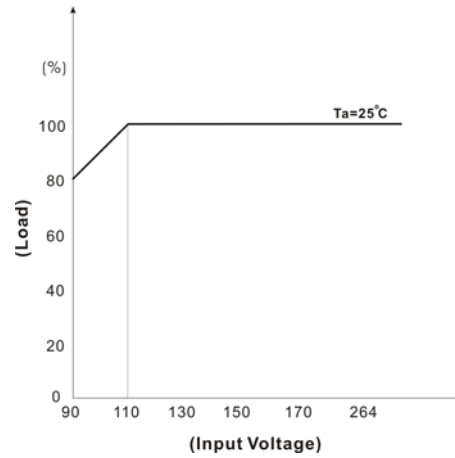
2.Ripple & Noise are measured at 20MHz of bandwidth with 0.1UF & 47UF parallel capacitor.

**MECHANICAL DIMENSION ( Top View )**



PIN#	SINGLE
1	AC IN (L)
2	AC IN (N)
3	FG
4	+DC OUT
5	+DC OUT
6	-DC OUT
7	-DC OUT

**DERATING**



**ASSEMBLY INSTRUCTIONS**

\*U Case T=2.0mm

Customer screws into the length of the case no higher than 0.5mm  
(Namely screw length for load plate thickness plus 2.5mm)

**BLOCK DIAGRAM**

