ARCH ELECTRONICS CORP.

VER : A_2 update : 2024.08.16

AC-DC ITE Switching Power Supply

AQF80 SERIES 80 Watts

KEY FEATURES

- Open Frame ITE Switching Power Supply
- Universal Input Range 90-264VAC, 47-63 Hz
- Operating Ambient Temperature Range -40°C to +80°C
- I/O Isolation 3000VAC
- No Load Power Consumption < 0.1W
- High Efficiency up to 90%
- Ultra Compact Size: 3.0 x 2.0 x 0.94 Inches
- Safety Approval to UL / IEC / EN 62368-1
- 3-Year Product Warranty

E199779

ELECTRICAL SPECIFICATIONS

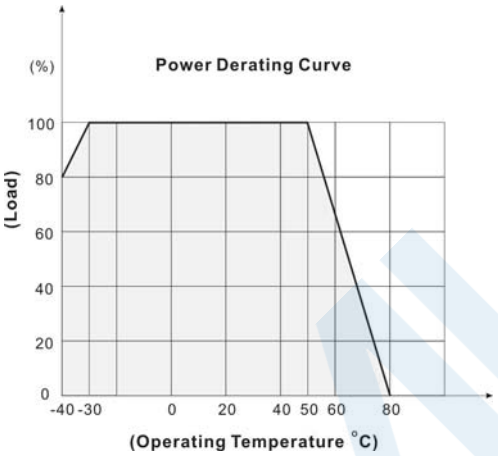
All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

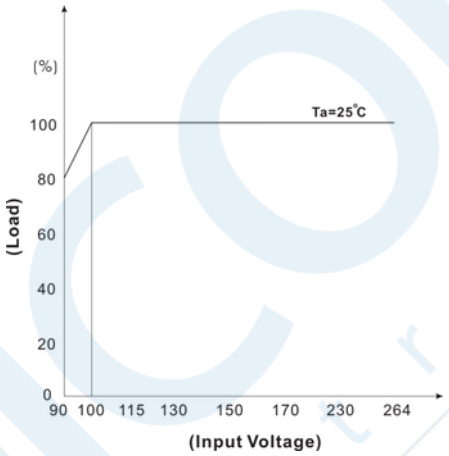
Model No.		AQF80-12S	AQF80-24S
Max Output Wattage (W)		80W	
Input	Voltage (Note 3)	90-264 VAC or 120-370 VDC	
	Frequency (Hz)	47-63 Hz	
	Current (Full load)	1800 mA max. (115 VAC) / 1000 mA max. (230 VAC)	
	Inrush Current (<2ms) (Clod Start)	50 A max. (115 VAC) / 100 A max. (230 VAC)	
	Leakage Current	0.25 mA max. (100-240 VAC)	
Output	Voltage (V.DC.)	12V	24V
	Voltage ADJ. Range	10.8~13.2V	21.6~26.4V
	Voltage Accuracy	±2%	
	Current (mA) (max.)	6666	3333
	Line Regulation (LL-HL) (typ.)	±1%	
	Load Regulation (0-100%) (typ.)	±1%	
	Maximum Capacitive Load	6000uF	1200uF
	Ripple & Noise (Full Load)	120mV	240mV
	Efficiency (at 230 VAC)	89.5%	90%
	Hold-up Time (typ)	30 ms (at 230VAC)	
Protection	Over Power Protection	Auto recovery	
	Over Voltage Protection	Zener diode clamp	
	Short Circuit Protection	Hiccup mode (automatic recovery)	
Isolation	Input-Output (V.AC)	3000VAC or 4242VDC	
Environment	Operating Temperature	-40°C…+80°C (with derating)	
	Storage Temperature	-40°C…+85°C	
	Temperature Coefficient	±0.05%/°C	
	Altitude During Operation (UL / IEC / EN 62368-1)	2000m	
	Humidity	60% RH	
	MTBF	>300,000 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)	3.0 x 2.0 x 0.94 Inches (76.2 x 50.8 x 24.0 mm) Tolerance ±0.5 mm	
	Weight	110 g	
	Cooling Method	Free air convection	
Safety	Approval	UL / IEC / EN 62368-1	
EMC	EMI (Conducted & Radiated Emission)	EN 55032 class B	
	EMS (Noise Immunity)	EN 55035	

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. 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.
3. Derating may be needed under low input voltages. Please check the derating curve for more details.
4. Please refer to our PDF file "AC-DC Application" on our website: www.archcorp.com.tw

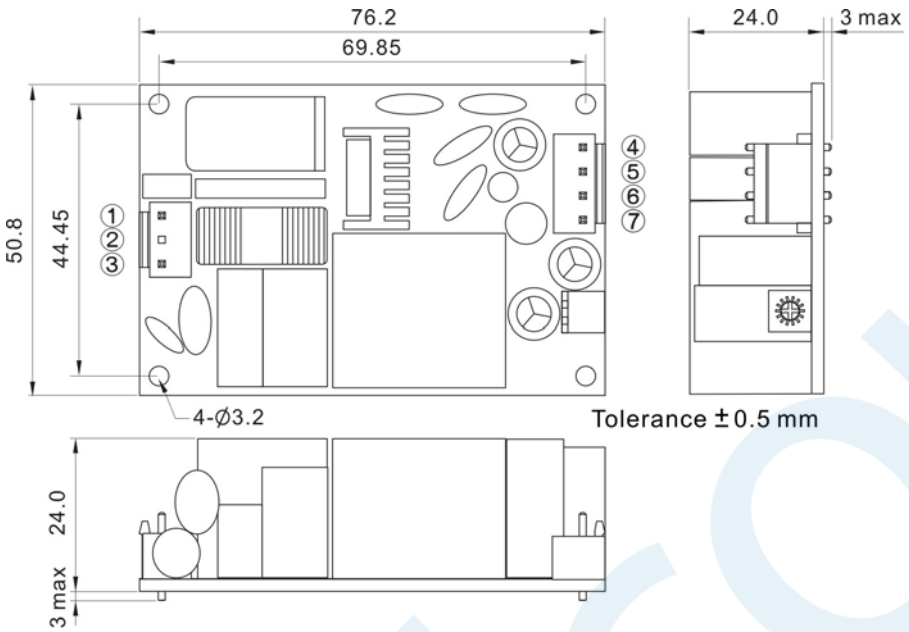
DERATING





AQF80 SERIES 80 Watts

MECHANICAL DIMENSIONS (Top View)



Brands		Alex		JST	
PIN#	Single	Mating Housing	Terminal	Mating Housing	Terminal
1	AC IN (L)	9396-3	96T series	VHR-3N	SVH-41T-P1.1
2	NO PIN				
3	AC IN (N)				
4~5	+DC OUT	9396-4	96T series	VHR-4N	SVH-41T-P1.1
6~7	-DC OUT				