MQF120O SERIES 120 Watts

KEY FEATURES

- Open Frame Medical Switching Power Supply
- Cooling by Natural Air Convection
- 100 Watts and 120 Watt with 10CFM Forced Air
- 4000VAC Input to Output 2MOPP Insulation
- High Efficiency up to 91%
- With P.F.C. Function >0.9
- <0.3W No Load Input Power
- EMI for Both Class I (with PE) and Class II (without PE) Configuration
- Suitable for BF Application with Appropriate System Consideration
- UL / IEC / EN 60601 3.1 Edition Safety Approvals
- 3-Year Product Warranty

E308218

ELECTRICAL SPECIFICATIONS

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

Model No.		MQF120O-12S	MQF120O-24S	MQF120O-48S
Max Output Wattage (with 10CFM FAN) (W)		120 W		
Max Output Wattage (Natural Convection) (W)		100 W		
Input	Voltage (Note 3)	90-264 VAC		
	Frequency (Hz)	47-63 Hz		
	Current (Full load)	< 2.0 A max. (115 VAC) / < 1.0 A max. (230 VAC)		
	Inrush Current (<2ms)	< 40 A max. (115 VAC) / < 70 A max. (230 VAC)		
	Leakage Current	< 0.1mA / 264 VAC (Touch Current)		
	Power Factor (at 230 VAC)	PF>0.9 at Full Load		
	No Load	< 0.3W (115 / 230 VAC)		
Output	Voltage (V.DC.)	12V	24V	48V
	Voltage Adj Range (V.DC.)	±10% Output Voltage		
	Voltage Accuracy	±2%		
	Current (with 10CFM FAN) (A) max	10	5	2.5
	Current (Natural Convection) (A) max	8.333	4.167	2.083
	Line Regulation	±1%		
	Load Regulation (10-100%)	±1%		
	Minimum Load	0%		
	Maximum Capacitive Load	3000μF	1500μF	500μF
	Ripple & Noise (max.) (Note 1)	160mV	1% Vout	
	Efficiency (at 230VAC)	90%	90%	91%
	Hold-up Time (at 115 VAC) (Note 2)	10 ms min.		
Protection	Over Power Protection	Auto recovery, Hiccup mode		
	Over Voltage Protection	Latch off		
	Over Temperature Protection	Latch off		
	Short Circuit Protection	Protection level 1 (nominal)：Continuous, Auto recovery		
		Protection level 2 (instantaneous high current)：Latch		
Isolation	Input-Output	4000VAC or 5656VDC		
	Input-FG	2000VAC or 2828VDC		
	Output-FG	1500VAC or 2121VDC		

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Model No.		MQF120O-12S	MQF120O-24S	MQF120O-48S
Environment	Operating Temperature	-30°C…+70°C (with derating)		
	Storage Temperature	-30°C…+85°C		
	Temperature Coefficient	±0.05%/°C		
	Altitude During Operation	5000m		
	Humidity	20~90% RH		
	Atmospheric Pressure	56 kPa to 106 kPa		
	MTBF	>250,000 h @ 25°C (MIL-HDBK-217F, Notice 1)		
	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)	3.04 x 2.0 x 1.2 Inches (77.2 x 50.8 x 30.7 mm) Tolerance ±0.5 mm		
	Weight	172 g		
	Cooling Method	Natural Convection / 10 CFM FAN		
Safety	Approval	UL / IEC / EN 60601 3.1rd Edition (2 x MOPP)		
EMC	Conducted EMI (Note 5)	EN55011 Conducted Class B		
	Radiated EMI (Note 5)	EN55011 Class I class B / Class II class A		
	EMS	EN60601-1-2 4th edition		

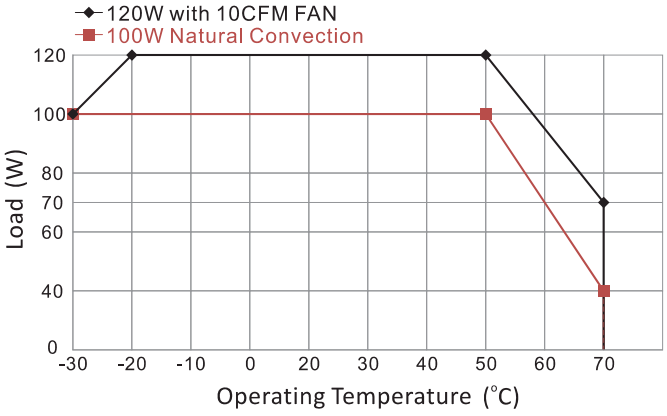
NOTE

1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
2. Hold-up Time measured at 90% Vout.
3. Please check the derating curve for more details.
4. Strongly recommend to conduct this test with AC Voltage. If customer wishes to test with DC Voltage, please disconnect all Y-Capacitors from Arch power supply.
5. Please secure the power supply unit to your metal case by using the four screw holes in the corners for either Class I or Class II equipment
6. CAUTION: Double pole, neutral fusing. Disconnect mains before servicing.
   (ATTENTION : 2 poles avec fusible sur le neutre. Deconnecter le secteur avant intervention.)

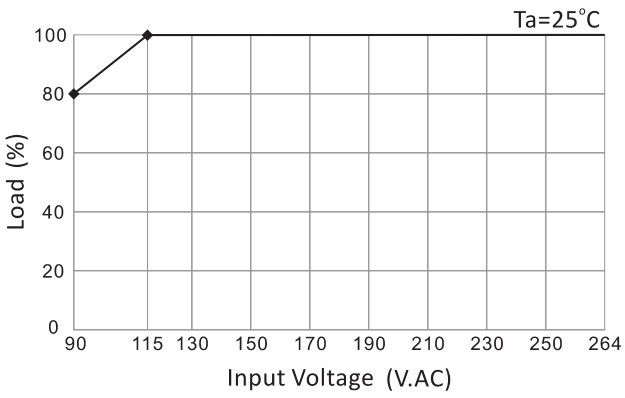
DERATING

If the input voltage is below 99VAC, the product can be used only in an environment where temperature is higher than -10 degrees Celsius.

Derating Output Load versus Operating Temperature



Derating Load versus Input Voltage



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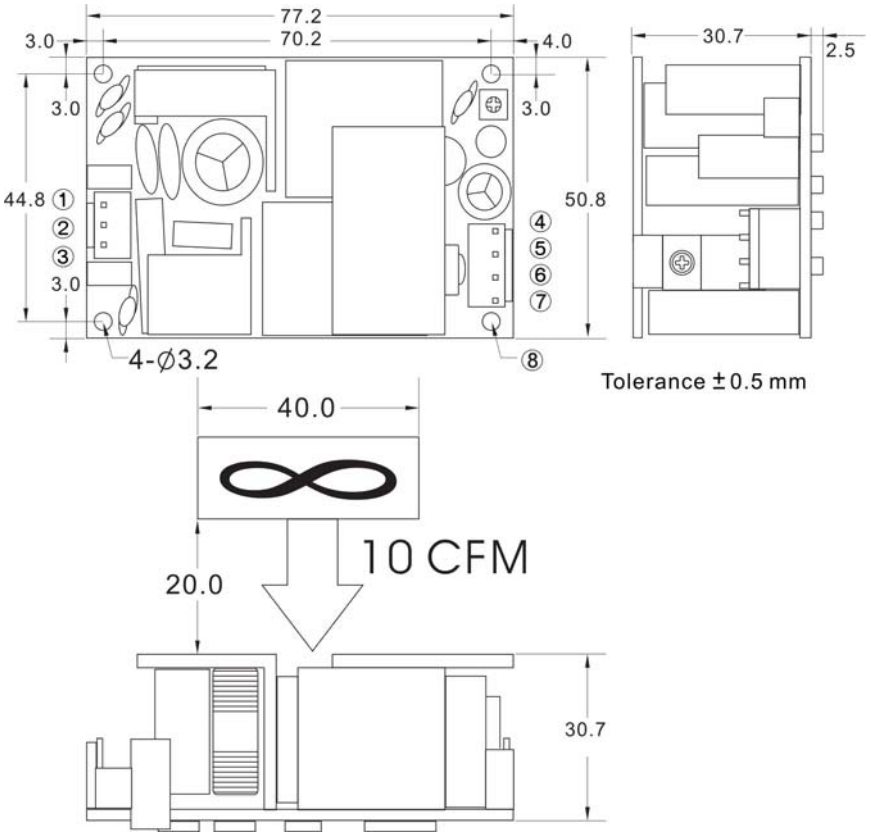
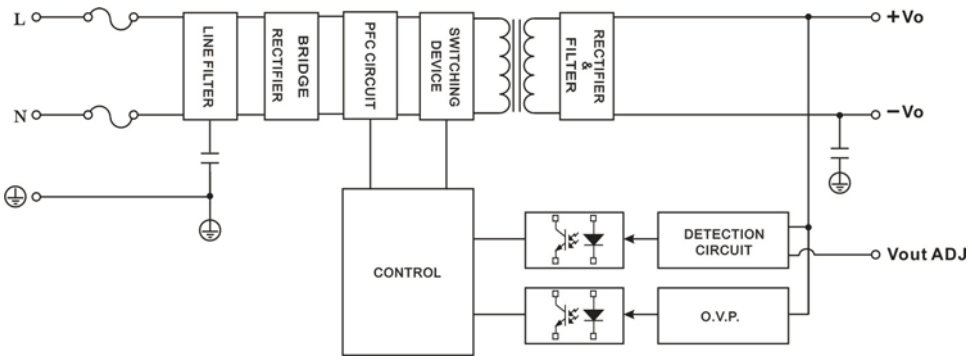
MECHANICAL DIMENSIONS (Top View)



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

BLOCK DIAGRAM



We reserve the right to make alterations in the product materials and specifications without prior notification and consent to improve reliability, function or design or otherwise.