

KEY FEATURES

- Switching Power Module for PCB Mountable
- 4000VAC Input to Output 2MOPP Insulation
- Cooling by Free Air Convection
- High Efficiency up to 93.5%
- With P.F.C. Function >0.9
- <0.5W No Load Input Power
- Protections: Over Load / Over Voltage / Over Temperature / Short Circuit
- 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 & UL / IEC / EN 60950 AM2 Safety Approvals
- 3-Year Product Warranty



(In Progress) (In Progress)

ELECTRICAL SPECIFICATIONS

All specifications valid at 230VAC input voltage, full load and +25°C after warm-up time unless otherwise stated.

Model No.	MQC100-12S	MQC100-15S	MQC100-24S	MQC100-48S	
Max Output Wattage (W)	100 W				
Input	Voltage (Note 4)	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)	< 45 A max. (115 VAC) / < 90 A max. (230 VAC)			
	Leakage Current	< 0.1mA / 264 VAC (Touch Current)			
	Power Factor	PF>0.9 at Full Load			
Output	Voltage (V.DC.)	12V	15V	24V	48V
	Voltage Accuracy	±2%			
	Current (A) (max.)	8.33	6.667	4.2	2.1
	Line Regulation	±1%			
	Load Regulation (0-100%)	±1%			
	Minimum Load	0%			
	Maximum Capacitive Load	6000µF	5000µF	2000µF	330µF
	Ripple & Noise (max.) (Note 2)	1% Vout			
	Efficiency (at 230VAC) (Note 5)	92.5%	92.5%	93%	93.5%
Hold-up Time (at 115 VAC) (Note 3)	10 ms min.				
Protection	Over Power Protection	Auto recovery, Hiccup mode			
	Over Voltage Protection	Auto recovery			
	Overt Temperature Protection	Auto recovery			
	Short Circuit Protection	Auto recovery, Hiccup mode			
Isolation	Input-Output	4000VAC or 5656VDC			
	Input-PE	2000VAC or 2828VDC			
	Output-PE	1500VAC or 2121VDC			
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	95% RH			
	MTBF	>250,000 h @ 25°C (MIL-HDBK-217F, Notice 1)			
	Atmospheric Pressure	56 kPa to 106 kPa			
Physical	Vibration	10~500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes.			
	Dimension (L x W x H)	4.3 x 2.3 x 1.38 Inches (109.0 x 58.5 x 35.0 mm) Tolerance ±0.5 mm			
	Weight	In Progress			
Cooling Method	Free convection				

ELECTRICAL SPECIFICATIONS

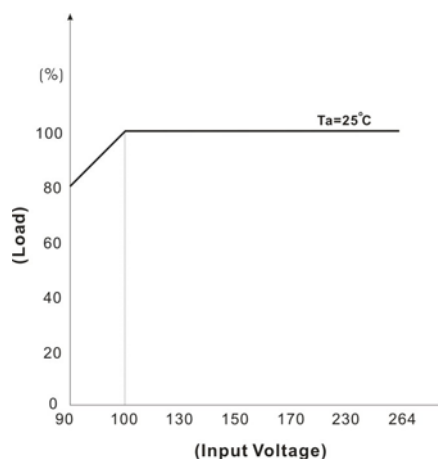
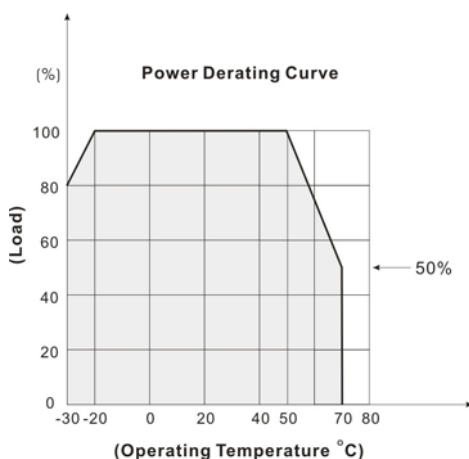
All specifications valid at 230VAC input voltage, full load and +25°C after warm-up time unless otherwise stated.

Model No.		MQC100-12S	MQC100-15S	MQC100-24S	MQC100-48S
Safety	Approval	UL / IEC / EN 60601 3.1 rd Edition & UL / IEC / EN 60950 AM2			
EMC	Conducted and radiated EMI (Note 6)	EN55032 Conducted & Radiated Class B			
	ESD	EN61000-4-2 air ± 8kV , Contact ± 4Kv (In Progress)			
	Radiated Immunity	EN61000-4-3 10V/m (In Progress)			
	Fast Transient	EN61000-4-4 ± 2kV (In Progress)			
	Surge	EN61000-4-5 ±1kV (In Progress)			
	Conducted Immunity	EN61000-4-6 10Vrms (In Progress)			
	PFMF	EN61000-4-8 30A/m (In Progress)			
	Dips	EN61000-4-11 30% 10ms (In Progress)			
	Interruption	EN61000-4-11 >95% 5000ms (In Progress)			

NOTE

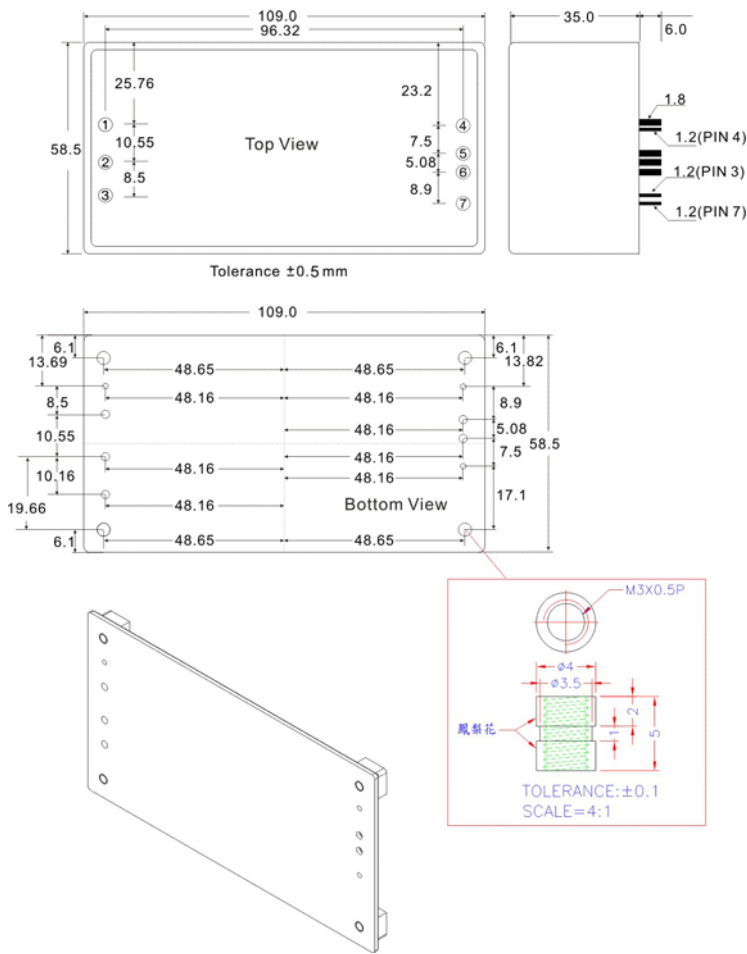
- This product is not designed for use in critical life support systems, equipment used in hazardous environment, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other the ones listed in this datasheet.**
- Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
- Hold-up Time measured at 90% Vout.
- Please check the derating curve for more details.
- After 30 minutes of burn-in
- 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
- Please refer to our PDF file "AC-DC Application" on our website: www.archcorp.com.tw

DERATING



TRIM

	12S		15S		24S		48S	
Trim →	+5%	0%	+5%	0%	+5%	0%	+5%	0%
-V	34KΩ	~ 10MΩ	26KΩ	~ 10MΩ	37.4KΩ	~ 10MΩ	38KΩ	~ 10MΩ
Trim →	0%	-5%	0%	-5%	0%	-5%	0%	-5%
+V	10MΩ	~ 106KΩ	10MΩ	~ 130KΩ	10MΩ	~ 270KΩ	10MΩ	~ 640KΩ

MECHANICAL DIMENSION (Top View)


PIN#	Φ	Single
1	1.2 \pm 0.1%mm	AC IN (N)
2	1.2 \pm 0.1%mm	AC IN (L)
3	1.2 \pm 0.1%mm	PE
4	1.2 \pm 0.1%mm	ON / OFF
(Provide +5Vdc Controlled)		
5	1.8 \pm 0.1%mm	+DC OUT
6	1.8 \pm 0.1%mm	-DC OUT
7	1.2 \pm 0.1%mm	Trim

Remark:

Please reserve the pin 4 hole on PCB.

If the remote on/off function is not required, please connect the pin 4 circuit layout with pin6, or keep pin 4 floating.

BLOCK DIAGRAM
