

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



ELECTRICAL SPECIFICATIONS

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

| Model No. | MQC150-12S | MQC150-24S | MQC150-48S | |
|------------------------------------|---|---|------------|-------|
| Max Output Wattage (W) | 150 W | | | |
| Input | Voltage (Note 3) | 90-264 VAC | | |
| | Frequency (Hz) | 47-63 Hz | | |
| | Current (Full load) | < 2.5 A max. (115 VAC) / < 1.25 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 | 24V | 48V |
| | Voltage Accuracy | ±2% | | |
| | Current (A) (max.) | 12.5 | 6.25 | 3.125 |
| | Line Regulation | ±1% | | |
| | Load Regulation (0-100%) | ±1% | | |
| | Minimum Load | 0% | | |
| | Maximum Capacitive Load | 6000µF | 2000µF | 330µF |
| | Ripple & Noise (max.) (Note 1) | 1% Vout | | |
| | Efficiency (at 230VAC) (Note 4) | 93% | 93.5% | 93.5% |
| Hold-up Time (at 115 VAC) (Note 2) | 10 ms min. | | | |
| Protection | Over Power Protection | Auto recovery, Hiccup mode | | |
| | Over Voltage Protection | Auto recovery | | |
| | Overt Temperature Protection | Auto recovery | | |
| | Short Circuit Protection | Protection level 1 (nominal) : Continuous, Auto recovery Protection level 2 (instantaneous high current) : Latch | | |
| 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 | | |
| | Atmospheric Pressure | 56 kPa to 106 kPa | | |
| | MTBF | >250,000 h @ 25°C (MIL-HDBK-217F, Notice 1) | | |
| Vibration | 10~500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes. | | | |
| Physical | 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 | 365 g | | |
| | Cooling Method | Free convection | | |

ELECTRICAL SPECIFICATIONS

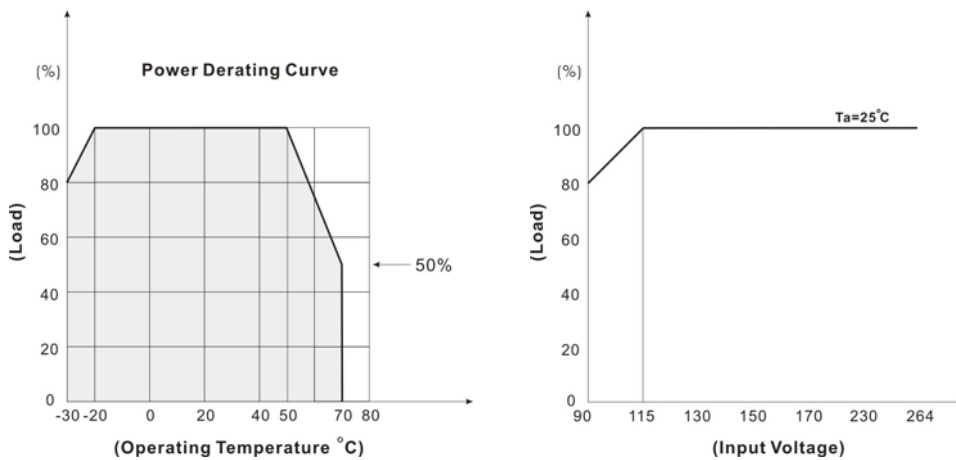
All specifications valid at 230VAC input voltage, full load and +25°C after warm-up time unless otherwise stated.

| | | | | |
|-----------|---------------|---|--|------------|
| Model No. | | MQC150-12S | MQC150-24S | MQC150-48S |
| Safety | | Approval UL / IEC / EN 60601 3.1 rd Edition & UL / IEC / EN 60950 AM2 | | |
| EMC | Conducted EMI | (Note 5) | EN55011 Conducted & Radiated 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. After 30 minutes of burn-in
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. Please refer to our PDF file "AC-DC Application" on our website: www.archcorp.com.tw

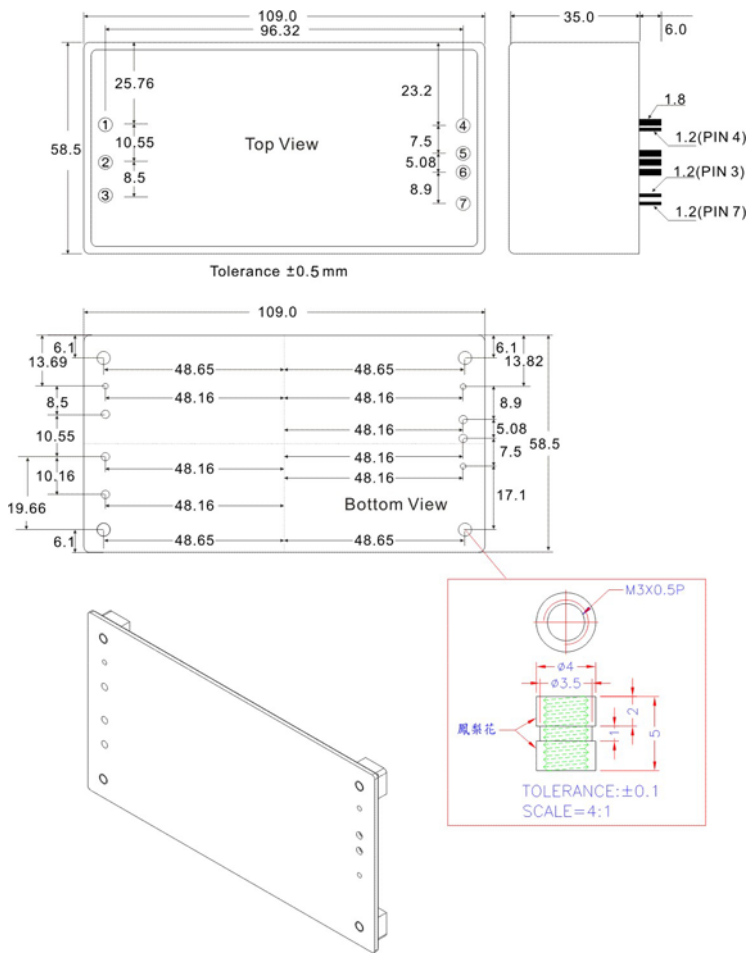
DERATING



TRIM

| | 12S | | 24S | | 48S | |
|-----------------|------|---------|--------|---------|------|---------|
| Trim → -V | +5% | 0% | +5% | 0% | +5% | 0% |
| | 34KΩ | ~ 10MΩ | 37.4KΩ | ~ 10MΩ | 38KΩ | ~ 10MΩ |
| Trim → +V | 0% | -5% | 0% | -5% | 0% | -5% |
| | 10MΩ | ~ 106KΩ | 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

