

# 125W Quad Output Switching Power Supply

# RQ-125 series



### ■ Features :

- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- LED indicator for power on
- 100% full load burn-in test
- All using 105°C long life electrolytic capacitors
- Withstand 300VAC surge input for 5 second
- High operating temperature up to 70°C
- Withstand 5G vibration test
- High efficiency, long life and high reliability
- 3 years warranty



### SPECIFICATION

| MODEL                                | RQ-125B  |   |            |              | RQ-125C                          |  |          |          | RQ-125D |                  |          |            |          |         |
|--------------------------------------|--|---|------------|--------------|----------------------------------|--|----------|----------|---------|------------------|----------|------------|----------|---------|
| OUTPUT                               | OUTPUT NUMBER  | CH1   | CH2        | CH3          | CH4                              | CH1  | CH2      | CH3      | CH4     | CH1              | CH2      | CH3        | CH4      |         |
|                                      | DC VOLTAGE   | 5V  | 12V        | -5V          | -12V                             | 5V   | 15V      | -5V      | -15V    | 5V               | 12V      | 24V        | -12V     |         |
|                                      | RATED CURRENT  | 11A   | 4.5A       | 1A           | 0.5A                             | 10A  | 4A       | 1A       | 0.5A    | 8A               | 2.5A     | 2A         | 0.5A     |         |
|                                      | CURRENT RANGE <small>Note.6</small>  | 2 ~ 12A   | 0.5 ~ 4.5A | 0.1 ~ 1A     | 0 ~ 1A                           | 2 ~ 12A  | 0.5 ~ 4A | 0.1 ~ 1A | 0 ~ 1A  | 2 ~ 12A          | 0.5 ~ 4A | 0.1 ~ 2.5A | 0 ~ 1A   |         |
|                                      | RATED POWER <small>Note.6</small>  | 120W  |            |              |                                  | 122.5W   |          |          |         | 124W             |          |            |          |         |
|                                      | RIPPLE & NOISE (max.) <small>Note.2</small>  | 80mVp-p   | 120mVp-p   | 80mVp-p      | 80mVp-p                          | 80mVp-p  | 120mVp-p | 80mVp-p  | 80mVp-p | 80mVp-p          | 80mVp-p  | 120mVp-p   | 150mVp-p | 80mVp-p |
|                                      | VOLTAGE ADJ. RANGE   | CH1: 4.75 ~ 5.5V  |            |              |                                  | CH1: 4.75 ~ 5.5V   |          |          |         | CH1: 4.75 ~ 5.5V |          |            |          |         |
|                                      | VOLTAGE TOLERANCE <small>Note.3</small>  | ±2.0%   | +8,-3%     | +6,-10%      | ±5.0%                            | ±2.0%  | +8,-3%   | +6,-10%  | ±5.0%   | ±2.0%            | +8,-3%   | +8,-3%     | ±8.0%    | ±5.0%   |
|                                      | LINE REGULATION <small>Note.4</small>  | ±0.5%   | ±1.0%      | ±1.0%        | ±1.0%                            | ±0.5%  | ±1.0%    | ±1.0%    | ±1.0%   | ±0.5%            | ±1.0%    | ±1.0%      | ±1.0%    | ±1.0%   |
|                                      | LOAD REGULATION <small>Note.5</small>  | ±1.0%   | ±3.0%      | ±6.0%        | ±2.0%                            | ±1.0%  | ±3.0%    | ±6.0%    | ±2.0%   | ±1.0%            | ±3.0%    | ±5.0%      | ±2.0%    | ±2.0%   |
| SETUP, RISE TIME                     | 500ms, 20ms/230VAC   |   |            |              | 1200ms, 30ms/115VAC at full load |  |          |          |         |                  |          |            |          |         |
| HOLD UP TIME (Typ.)                  | 25ms/230VAC  |   |            |              | 30ms/115VAC at full load         |  |          |          |         |                  |          |            |          |         |
| INPUT                                | VOLTAGE RANGE  | 88 ~ 132VAC / 176 ~ 264VAC selected by switch             |            |              |                                  | 248 ~ 373VDC(Withstand 300VAC surge for 5sec. Without damage)                          |          |          |         |                  |          |            |          |         |
|                                      | FREQUENCY RANGE  | 47 ~ 63Hz   |            |              |                                  |  |          |          |         |                  |          |            |          |         |
|                                      | EFFICIENCY (Typ.)  | 79%   |            |              |                                  | 80%  |          |          |         | 82%              |          |            |          |         |
|                                      | AC CURRENT (Typ.)  | 3A/115VAC   |            | 2A/230VAC    |                                  |  |          |          |         |                  |          |            |          |         |
|                                      | INRUSH CURRENT (Typ.)  | COLD START 40A/230VAC                                     |            |              |                                  |  |          |          |         |                  |          |            |          |         |
| LEAKAGE CURRENT                      | <2mA / 240VAC  |   |            |              |                                  |  |          |          |         |                  |          |            |          |         |
| PROTECTION                           | OVERLOAD   | 110 ~ 150% rated output power                             |            |              |                                  | Protection type : Hiccup mode, recovers automatically after fault condition is removed |          |          |         |                  |          |            |          |         |
|                                      | OVER VOLTAGE   | CH1: 5.75 ~ 6.75V   |            |              |                                  | Protection type : Hiccup mode, recovers automatically after fault condition is removed |          |          |         |                  |          |            |          |         |
| ENVIRONMENT                          | WORKING TEMP.  | -25 ~ +70°C (Refer to "Derating Curve")                   |            |              |                                  |  |          |          |         |                  |          |            |          |         |
|                                      | WORKING HUMIDITY   | 20 ~ 90% RH non-condensing                                |            |              |                                  |  |          |          |         |                  |          |            |          |         |
|                                      | STORAGE TEMP., HUMIDITY  | -40 ~ +85°C, 10 ~ 95% RH                                  |            |              |                                  |  |          |          |         |                  |          |            |          |         |
|                                      | TEMP. COEFFICIENT  | ±0.03%/°C (0 ~ 50°C) on +5V output                        |            |              |                                  |  |          |          |         |                  |          |            |          |         |
| VIBRATION                            | 10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes  |   |            |              |                                  |  |          |          |         |                  |          |            |          |         |
| SAFETY & EMC <small>(Note 7)</small> | SAFETY STANDARDS   | UL60950-1, TUV EN60950-1 approved                         |            |              |                                  |  |          |          |         |                  |          |            |          |         |
|                                      | WITHSTAND VOLTAGE  | I/P-O/P:3KVAC   |            | I/P-FG:2KVAC |                                  | O/P-FG:0.5KVAC   |          |          |         |                  |          |            |          |         |
|                                      | ISOLATION RESISTANCE   | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C/ 70% RH |            |              |                                  |  |          |          |         |                  |          |            |          |         |
|                                      | EMC EMISSION   | Compliance to EN55032 (CISPR32) Class B, EN61000-3-2,-3   |            |              |                                  |  |          |          |         |                  |          |            |          |         |
| EMC IMMUNITY                         | Compliance to EN61000-4-2,3,4,5,6,8,11, EN61000-6-2 (EN50082-2), heavy industry level, criteria A  |   |            |              |                                  |  |          |          |         |                  |          |            |          |         |
| OTHERS                               | MTBF   | 203.1Khrs min. MIL-HDBK-217F (25°C)                       |            |              |                                  |  |          |          |         |                  |          |            |          |         |
|                                      | DIMENSION  | 199*98*38mm (L*W*H)                                       |            |              |                                  |  |          |          |         |                  |          |            |          |         |
|                                      | PACKING  | 0.7Kg; 20pcs/14Kg/0.8CUFT                                 |            |              |                                  |  |          |          |         |                  |          |            |          |         |
| NOTE                                 | <ol style="list-style-type: none"> <li>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>3. Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>4. Line regulation is measured from low line to high line at rated load.</li> <li>5. Load regulation is measured from 20% to 100% rated load, and other output at 60% rated load.</li> <li>6. Each output can work within current range. But total output power can't exceed rated output power.</li> <li>7. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</li> <li>8. Length of set up time is measured at cold first start. Turning ON/OFF the power supply very quickly may lead to increase of the set up time.</li> </ol> |   |            |              |                                  |  |          |          |         |                  |          |            |          |         |

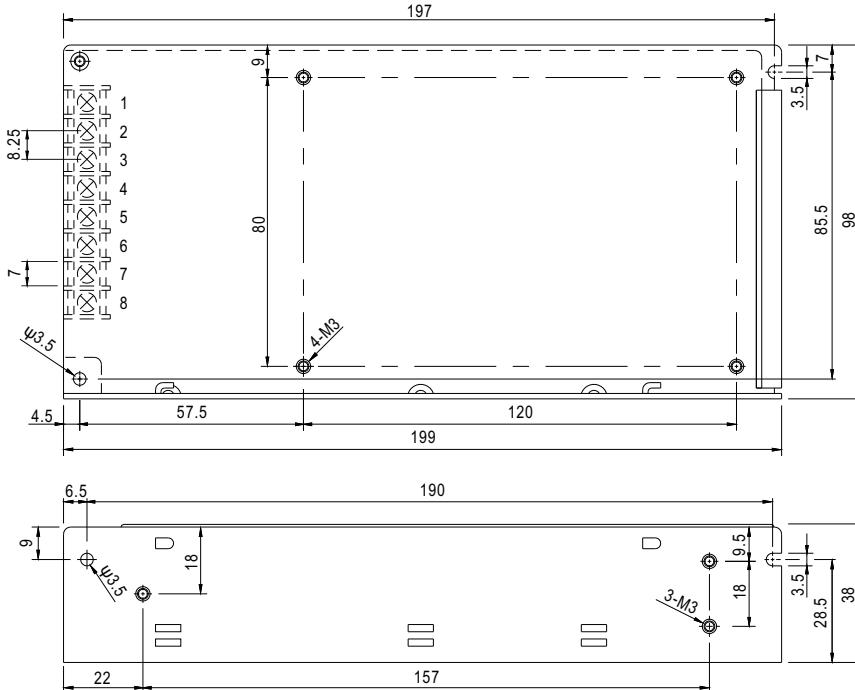
File Name:RQ-125-SPEC 2017-07-14



Note: all features are subject to change without notice.

**Mechanical Specification**

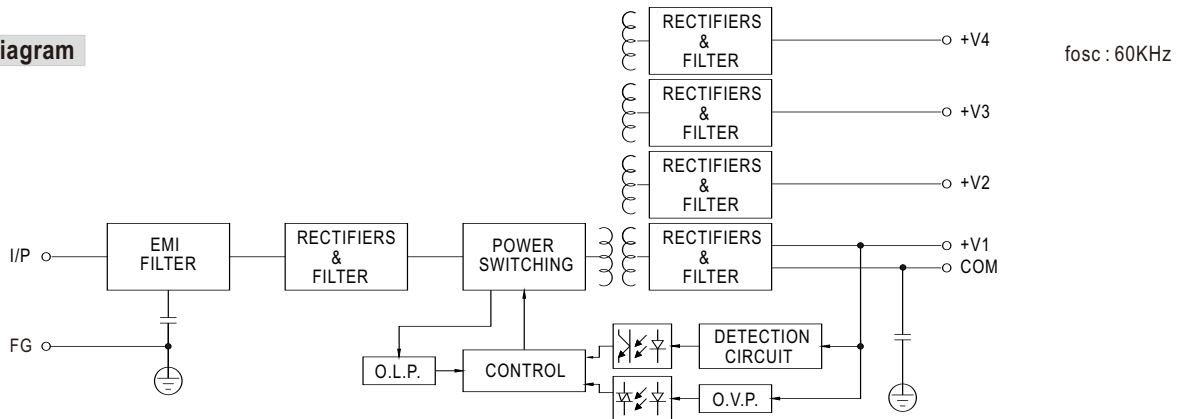
Case No. 902 Unit:mm



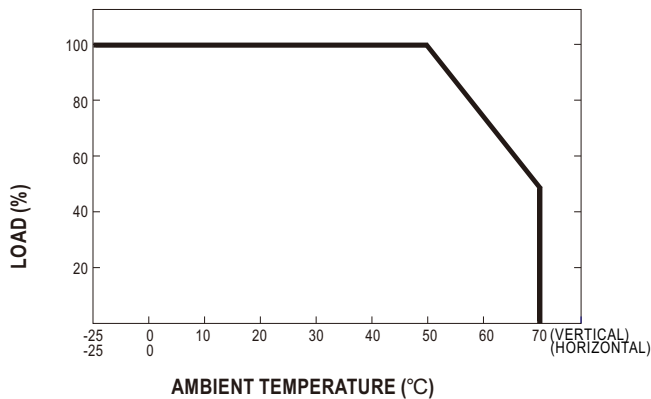
Terminal Pin No. Assignment

| Pin No. | Assignment    | Pin No. | Assignment    |
|---------|---------------|---------|---------------|
| 1       | AC/L          | 5       | DC OUTPUT V3  |
| 2       | AC/N          | 6       | DC OUTPUT +V2 |
| 3       | FG $\perp$    | 7       | DC OUTPUT COM |
| 4       | DC OUTPUT -V4 | 8       | DC OUTPUT +V1 |

**Block Diagram**



**Derating Curve**



**Static Characteristics**

