



■ Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protections:Short circuit/Over load/Over voltage
- Forced air cooling by built-in DC fan
- CH4:±Polarity is selectable
- Fixed switching frequency at 100KHz(Optional)
- 3 years warranty



SPECIFICATION

| MODEL | | QP-150-3A | | | | QP-150-3B | | | | QP-150-3C | | | |
|------------------------|--|---|----------|-----------------------------|---------------------------------------|---|----------|-------------------|----------|------------------|----------|-------------------|----------|
| OUTPUT | OUTPUT NUMBER | CH1 | CH2 | CH3 | CH4 | CH1 | CH2 | CH3 | CH4 | CH1 | CH2 | CH3 | CH4 |
| | DC VOLTAGE | 5V | 3.3V | 12V | -5V | 5V | 3.3V | 12V | -12V | 5V | 3.3V | 15V | -15V |
| | RATED CURRENT | 10A | 10A | 5A | 0.6A | 10A | 10A | 5A | 0.6A | 10A | 10A | 4A | 0.6A |
| | CURRENT RANGE | 3 ~ 15A | 0 ~ 15A | 0.4 ~ 5A | 0 ~ 1A | 3 ~ 15A | 0 ~ 15A | 0.4 ~ 5A | 0 ~ 1A | 3 ~ 15A | 0 ~ 15A | 0.4 ~ 5A | 0 ~ 1A |
| | RATED POWER (max.) | 146W | | | | 150.2W | | | | 152W | | | |
| | RIPPLE & NOISE (max.) Note.2 | 100mVp-p | 100mVp-p | 150mVp-p | 150mVp-p | 100mVp-p | 100mVp-p | 150mVp-p | 150mVp-p | 100mVp-p | 100mVp-p | 150mVp-p | 150mVp-p |
| | VOLTAGE ADJ. RANGE | CH1: 4.75 ~ 5.5V | | CH2: 3.14 ~ 3.63V | | CH1: 4.75 ~ 5.5V | | CH2: 3.14 ~ 3.63V | | CH1: 4.75 ~ 5.5V | | CH2: 3.14 ~ 3.63V | |
| | VOLTAGE TOLERANCE Note.3 | ±3.0% | ±3.0% | ±6.0% | ±5.0% | ±3.0% | ±3.0% | ±6.0% | ±5.0% | ±3.0% | ±3.0% | +8,-6% | ±5.0% |
| | LINE REGULATION | ±1.0% | ±1.0% | ±2.0% | ±1.0% | ±1.0% | ±1.0% | ±2.0% | ±1.0% | ±1.0% | ±1.0% | ±2.0% | ±1.0% |
| | LOAD REGULATION | ±2.0% | ±2.0% | ±6.0% | ±2.0% | ±2.0% | ±2.0% | ±6.0% | ±2.0% | ±2.0% | ±2.0% | ±6.0% | ±2.0% |
| SETUP, RISE, HOLD TIME | 800ms, 50ms, 16ms/230VAC | | | | 800ms, 50ms, 16ms/115VAC at full load | | | | | | | | |
| INPUT | VOLTAGE RANGE | 90 ~ 264VAC | | 127 ~ 370VDC | | | | | | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | | | | | | | |
| | POWER FACTOR | PF>0.95/230VAC | | PF>0.98/115VAC at full load | | | | | | | | | |
| | EFFICIENCY (Typ.) | 73% | | | | 75% | | | | 74% | | | |
| | AC CURRENT | 2.5A/115VAC | | 1.2A/230VAC | | | | | | | | | |
| | INRUSH CURRENT (max.) | COLD START ≤45A/230V | | | | | | | | | | | |
| | LEAKAGE CURRENT | <3.5mA / 240VAC | | | | | | | | | | | |
| PROTECTION | OVER LOAD | 105 ~ 150% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed | | | | | | | | | | | |
| | OVER VOLTAGE | CH1:5.75 ~ 6.75V | | CH2:3.8 ~ 4.4V | | Protection type : Shut down o/p voltage, re-power on to recover | | | | | | | |
| | OVER TEMPERATURE(OPTION) | 95°C ±5°C (TSW1) Protection type : Shut down o/p voltage, recovers automatically after temperature goes down | | | | | | | | | | | |
| ENVIRONMENT | WORKING TEMP. | -10 ~ +60°C (Refer to output load derating curve) | | | | | | | | | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | | | | | | | | | |
| | STORAGE TEMP., HUMIDITY | -20 ~ +85°C, 10 ~ 95% RH | | | | | | | | | | | |
| | TEMP. COEFFICIENT | ±0.03%/°C (0~50°C) | | | | | | | | | | | |
| | VIBRATION | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes | | | | | | | | | | | |
| SAFETY & EMC (Note 4) | SAFETY STANDARDS | UL60950-1, TUV EN60950-1 Approved | | | | | | | | | | | |
| | WITHSTAND VOLTAGE | I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC | | | | | | | | | | | |
| | ISOLATION RESISTANCE | I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC | | | | | | | | | | | |
| | EMI CONDUCTION & RADIATION | Compliance to EN55022 (CISPR22) Class B | | | | | | | | | | | |
| | HARMONIC CURRENT | Compliance to EN61000-3-2,-3 | | | | | | | | | | | |
| OTHERS | EMS IMMUNITY | Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, Light industry level, criteria A | | | | | | | | | | | |
| | MTBF | 141.5K hrs min. MIL-HDBK-217F (25°C) | | | | | | | | | | | |
| | DIMENSION | 199*99*50mm (L*W*H) | | | | | | | | | | | |
| | PACKING | 0.93Kg; 20pcs/19.6Kg/1.28CUFT | | | | | | | | | | | |
| NOTE | <p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.</p> | | | | | | | | | | | | |



■ Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protections: Short circuit/Over load/Over voltage
- Forced air cooling by built-in DC fan
- CH4: ±Polarity is selectable
- Fixed switching frequency at 100KHz(Optional)
- 3 years warranty

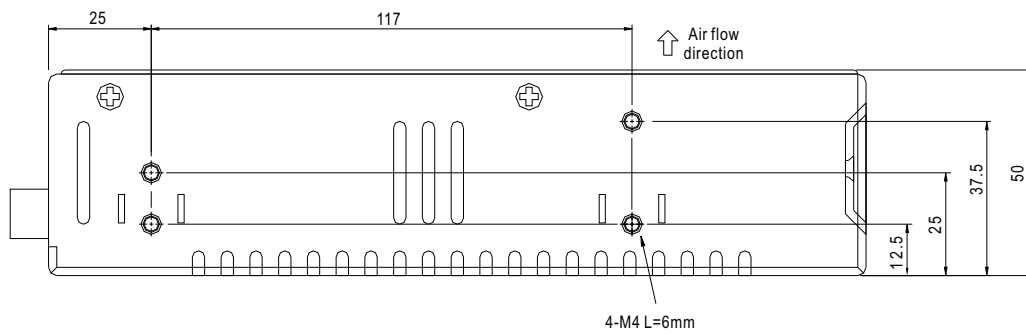
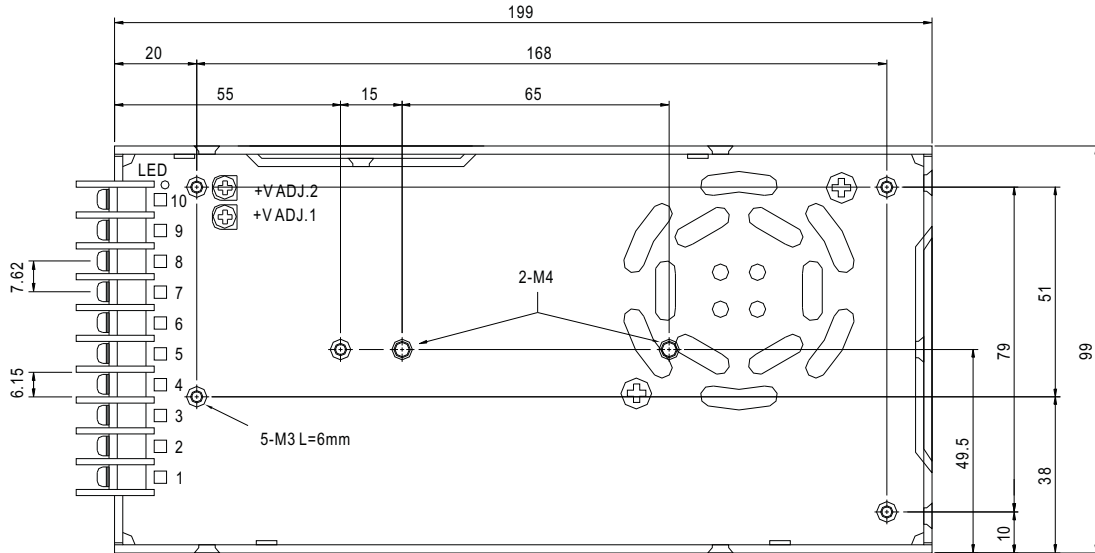


SPECIFICATION

| MODEL | | QP-150-3D | | | | QP-150D | | | | QP-150F | | | |
|------------------------|--|---|----------|-----------------------------|---------------------------------------|------------------|----------|-------------------|----------|------------------|----------|--------------------|----------|
| OUTPUT | OUTPUT NUMBER | CH1 | CH2 | CH3 | CH4 | CH1 | CH2 | CH3 | CH4 | CH1 | CH2 | CH3 | CH4 |
| | DC VOLTAGE | 5V | 3.3V | 24V | -12V | 5V | 12V | 24V | -12V | 5V | 15V | 24V | -15V |
| | RATED CURRENT | 10A | 10A | 2.5A | 0.6A | 10A | 4A | 2A | 0.6A | 10A | 3A | 2A | 0.6A |
| | CURRENT RANGE | 3 ~ 15A | 0 ~ 15A | 0.3 ~ 3A | 0 ~ 1A | 3 ~ 15A | 0 ~ 5A | 0.4 ~ 3A | 0 ~ 1A | 3 ~ 15A | 0 ~ 5A | 0.4 ~ 3A | 0 ~ 1A |
| | RATED POWER (max.) | 150.2W | | | | 150.2W | | | | 152W | | | |
| | RIPPLE & NOISE (max.) Note.2 | 100mVp-p | 100mVp-p | 150mVp-p | 150mVp-p | 120mVp-p | 150mVp-p | 200mVp-p | 150mVp-p | 120mVp-p | 150mVp-p | 200mVp-p | 150mVp-p |
| | VOLTAGE ADJ. RANGE | CH1: 4.75 ~ 5.5V | | CH2: 3.14 ~ 3.63V | | CH1: 4.75 ~ 5.5V | | CH2: 11.4 ~ 13.2V | | CH1: 4.75 ~ 5.5V | | CH2: 14.3 ~ 16.5V | |
| | VOLTAGE TOLERANCE Note.3 | ±3.0% | ±3.0% | ±6.0% | ±5.0% | ±3.0% | ±3.0% | ±6.0% | ±5.0% | ±3.0% | ±3.0% | ±6.0% | ±5.0% |
| | LINE REGULATION | ±1.0% | ±1.0% | ±2.0% | ±1.0% | ±1.0% | ±1.0% | ±2.0% | ±1.0% | ±1.0% | ±1.0% | ±2.0% | ±1.0% |
| | LOAD REGULATION | ±2.0% | ±2.0% | ±6.0% | ±2.0% | ±2.0% | ±2.0% | ±6.0% | ±2.0% | ±2.0% | ±2.0% | ±6.0% | ±2.0% |
| SETUP, RISE, HOLD TIME | 800ms, 50ms, 16ms/230VAC | | | | 800ms, 50ms, 16ms/115VAC at full load | | | | | | | | |
| INPUT | VOLTAGE RANGE | 90 ~ 264VAC | | 127 ~ 370VDC | | | | | | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | | | | | | | |
| | POWER FACTOR | PF>0.95/230VAC | | PF>0.98/115VAC at full load | | | | | | | | | |
| | EFFICIENCY (Typ.) | 76% | | | | 78% | | | | 78% | | | |
| | AC CURRENT | 2.5A/115VAC | | 1.2A/230VAC | | | | | | | | | |
| | INRUSH CURRENT (max.) | COLD START ≤45A/230V | | | | | | | | | | | |
| | LEAKAGE CURRENT | <3.5mA / 240VAC | | | | | | | | | | | |
| PROTECTION | OVER LOAD | 105 ~ 150% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed | | | | | | | | | | | |
| | OVER VOLTAGE | CH1:5.75 ~ 6.75V | | CH2:3.8 ~ 4.4V | | CH1:5.75 ~ 6.75V | | CH2:13.8 ~ 16.2V | | CH1:5.75 ~ 6.75V | | CH2:17.25 ~ 20.25V | |
| | | Protection type : Shut down o/p voltage, re-power on to recover | | | | | | | | | | | |
| | OVER TEMPERATURE(OPTION) | 95°C ±5°C (TSW1) Protection type : Shut down o/p voltage, recovers automatically after temperature goes down | | | | | | | | | | | |
| ENVIRONMENT | WORKING TEMP. | -10 ~ +60°C (Refer to output load derating curve) | | | | | | | | | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | | | | | | | | | |
| | STORAGE TEMP., HUMIDITY | -20 ~ +85°C, 10 ~ 95% RH | | | | | | | | | | | |
| | TEMP. COEFFICIENT | ±0.03%/°C (0~50°C) | | | | | | | | | | | |
| | VIBRATION | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes | | | | | | | | | | | |
| SAFETY & EMC (Note 4) | SAFETY STANDARDS | UL60950-1, TUV EN60950-1 Approved | | | | | | | | | | | |
| | WITHSTAND VOLTAGE | I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC | | | | | | | | | | | |
| | ISOLATION RESISTANCE | I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC | | | | | | | | | | | |
| | EMI CONDUCTION & RADIATION | Compliance to EN55022 (CISPR22) Class B | | | | | | | | | | | |
| | HARMONIC CURRENT | Compliance to EN61000-3-2,-3 | | | | | | | | | | | |
| | EMS IMMUNITY | Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, Light industry level, criteria A | | | | | | | | | | | |
| OTHERS | MTBF | 141.5K hrs min. MIL-HDBK-217F (25°C) | | | | | | | | | | | |
| | DIMENSION | 199*99*50mm (L*W*H) | | | | | | | | | | | |
| | PACKING | 0.93Kg; 20pcs/19.6Kg/1.28CUFT | | | | | | | | | | | |
| NOTE | <p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.</p> | | | | | | | | | | | | |

Mechanical Specification

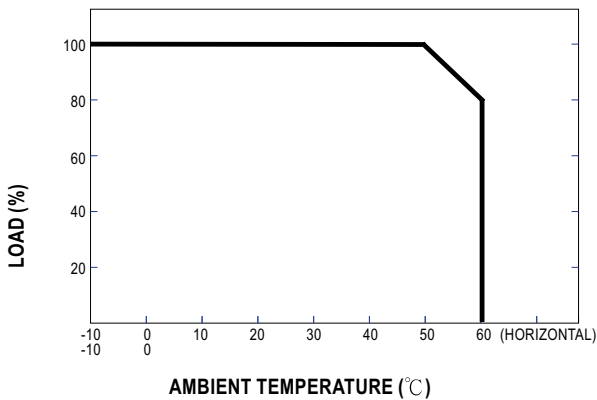
Case No. 916B Unit:mm



Terminal Pin No. Assignment :

| Pin No. | Assignment | Pin No. | Assignment | Pin No. | Assignment |
|---------|------------|---------|--------------|---------|---------------|
| 1 | AC/L | 4 | DC OUTPUT V4 | 8,9 | DC OUTPUT COM |
| 2 | AC/N | 5 | DC OUTPUT V3 | 10 | DC OUTPUT V2 |
| 3 | FG ≐ | 6,7 | DC OUTPUT V1 | | |

Derating Curve



Output Derating VS Input Voltage

