



100W Quad Output with PFC Function

QP-100 series



■ Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protections: Short circuit / Overload / Over voltage
- Free air cooling convection
- CH4: Polarity is selectable
- Fixed switching frequency at 100KHz
- 3 years warranty



SPECIFICATION

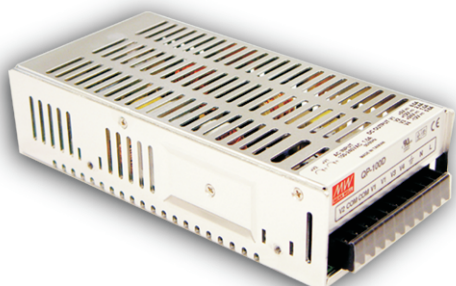
| MODEL | | QP-100-3A | | | | QP-100-3B | | | | QP-100-3C | | | |
|-----------------------|--|---|----------|-----------------------------|---------------------------------|---|----------|---|----------|------------------|----------|-------------------|----------|
| OUTPUT | OUTPUT NUMBER | CH1 | CH2 | 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 | 8A | 8A | 2.5A | 0.6A | 8A | 8A | 2.2A | 0.6A | 8A | 8A | 1.7A | 0.6A |
| | CURRENT RANGE | 2 ~ 10A | 0 ~ 10A | 0.3 ~ 3A | 0 ~ 1A | 2 ~ 10A | 0 ~ 10A | 0.3 ~ 3A | 0 ~ 1A | 2 ~ 10A | 0 ~ 10A | 0.3 ~ 2A | 0 ~ 1A |
| | RATED POWER (max.) | 99.4W | | | | 100W | | | | 100.9W | | | |
| | 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 TIME | 800ms, 50ms/230VAC | | | | 800ms, 50ms/115VAC at full load | | | | | | | | |
| HOLD UP TIME (Typ.) | 24ms/230VAC | | | | 24ms/115VAC at full load | | | | | | | | |
| INPUT | VOLTAGE RANGE Note.5 | 90 ~ 264VAC | | 127 ~ 370VDC | | | | | | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | | | | | | | |
| | POWER FACTOR (Typ.) | PF>0.95/230VAC | | PF>0.98/115VAC at full load | | | | | | | | | |
| | EFFICIENCY (Typ.) | 74% | | | | 74% | | | | 75% | | | |
| | AC CURRENT (Typ.) | 1.5A/115VAC | | 0.75A/230VAC | | | | | | | | | |
| | INRUSH CURRENT (Typ.) | COLD START ≤40A/230V | | | | | | | | | | | |
| | LEAKAGE CURRENT | <3.5mA / 240VAC | | | | | | | | | | | |
| PROTECTION | OVERLOAD | 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 | | | | | | | | | | | |
| | EMS IMMUNITY | Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, light industry level, criteria A | | | | | | | | | | | |
| OTHERS | MTBF | 139.9K hrs min. MIL-HDBK-217F (25°C) | | | | | | | | | | | |
| | DIMENSION | 199*99*50mm (L*W*H) | | | | | | | | | | | |
| | PACKING | 0.87Kg; 20pcs/18.4Kg/1.28CUFT | | | | | | | | | | | |
| NOTE | <ol style="list-style-type: none"> 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 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. 5. Derating may be needed under low input voltages. Please check the derating curve for more details. | | | | | | | | | | | | |

File Name:QP-100-SPEC 2007-10-25



100W Quad Output with PFC Function

QP-100 series



■ Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protections:Short circuit/Over load/Over voltage
- Free air cooling convection
- CH4: Polarity is selectable
- Fixed switching frequency at 100KHz
- 3 years warranty



SPECIFICATION

| MODEL | | QP-100-3D | | | | QP-100D | | | | QP-100F | | | |
|-----------------------|--|---|--------------------------|-----------------------------|---------------------------------|------------------|----------|-------------------|----------|------------------|----------|--------------------|----------|
| 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 | 8A | 8A | 1.3A | 0.6A | 8A | 2.4A | 1A | 0.6A | 8A | 2A | 1A | 0.6A |
| | CURRENT RANGE | 2 ~ 10A | 0 ~ 10A | 0.3 ~ 2A | 0 ~ 1A | 2 ~ 10A | 0 ~ 3A | 0.3 ~ 2A | 0 ~ 1A | 2 ~ 10A | 0 ~ 3A | 0.3 ~ 2A | 0 ~ 1A |
| | RATED POWER (max.) | 104.8W | | | | 100W | | | | 103W | | | |
| | RIPPLE & NOISE (max.) Note.2 | 100mVp-p | 100mVp-p | 150mVp-p | 150mVp-p | 120mVp-p | 150mVp-p | 200mVp-p | 150mVp-p | 120mVp-p | 180mVp-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 TIME | 800ms, 50ms/230VAC | | | | 800ms, 50ms/115VAC at full load | | | | | | | | |
| HOLD TIME (Typ.) | 24ms/230VAC | | 24ms/115VAC at full load | | | | | | | | | | |
| INPUT | VOLTAGE RANGE Note.5 | 90 ~ 264VAC | | 127 ~ 370VDC | | | | | | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | | | | | | | |
| | POWER FACTOR (Typ.) | PF>0.95/230VAC | | PF>0.98/115VAC at full load | | | | | | | | | |
| | EFFICIENCY (Typ.) | 75% | | | | 78% | | | | 78% | | | |
| | AC CURRENT (Typ.) | 1.5A/115VAC | | 0.75A/230VAC | | | | | | | | | |
| | INRUSH CURRENT (Typ.) | COLD START ≤40A/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 | 139.9K hrs min. MIL-HDBK-217F (25°C) | | | | | | | | | | | |
| | DIMENSION | 199*99*50mm (L*W*H) | | | | | | | | | | | |
| | PACKING | 0.87Kg; 20pcs/18.4Kg/1.28CUFT | | | | | | | | | | | |
| NOTE | <ol style="list-style-type: none"> 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 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. 5. Derating may be needed under low input voltages. Please check the derating curve for more details. | | | | | | | | | | | | |

File Name:QP-100-SPEC 2007-10-25

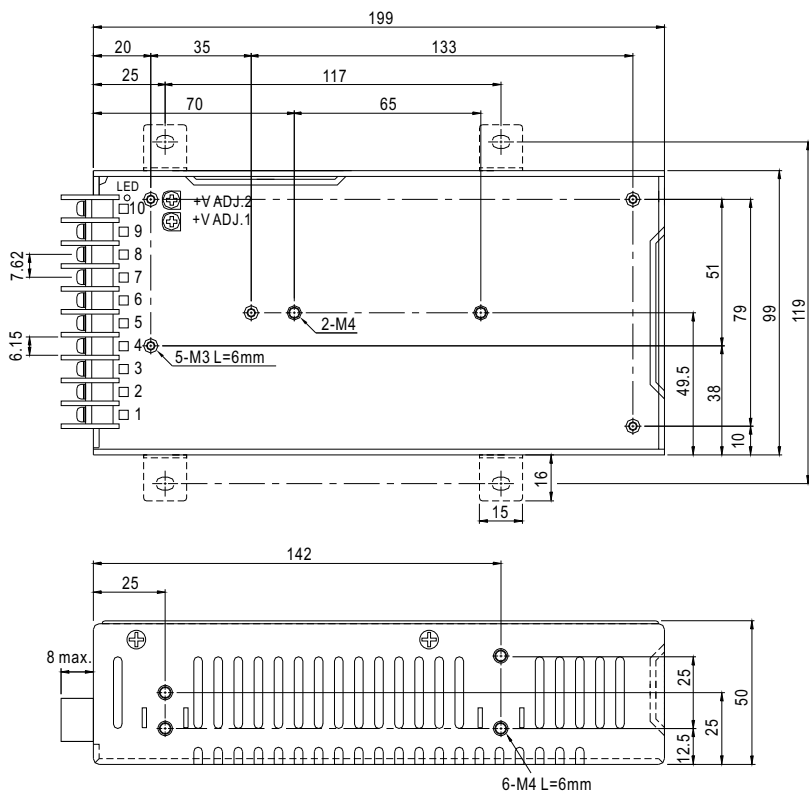


100W Quad Output with PFC Function

QP-100 series

Mechanical Specification

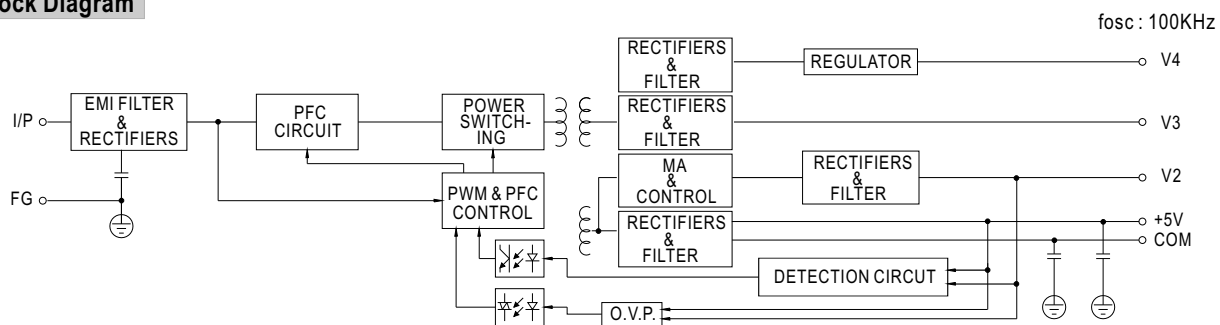
Case No. 916A Unit:mm



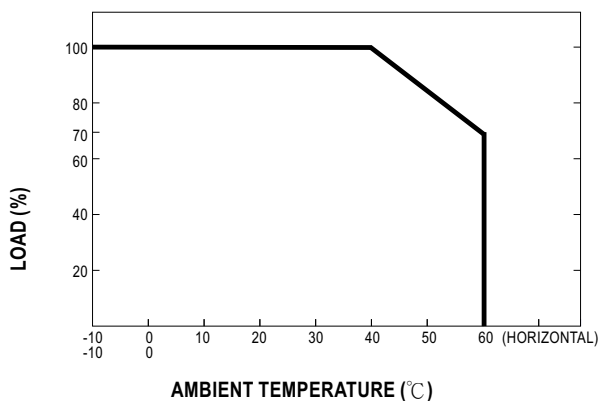
Terminal Pin No. Assignment :

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

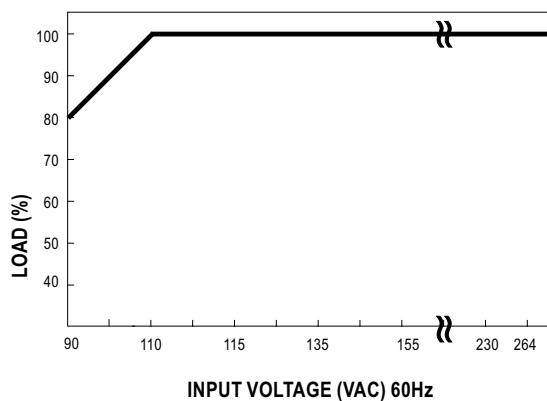
Block Diagram



Derating Curve



Output Derating VS Input Voltage





100W Quad Output with PFC Function

QP-100B,C series



■ Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protections: Short circuit / Overload / Over voltage
- Free air cooling convection
- Fixed switching frequency at 100KHz
- 3 years warranty



SPECIFICATION

| MODEL | | QP-100B | | | | QP-100C | | | | |
|-----------------------|--|---|----------|-----------------------------|----------|-----------------|----------|-----------|----------|--|
| OUTPUT | OUTPUT NUMBER | CH1 | CH2 | CH3 | CH4 | CH1 | CH2 | CH3 | CH4 | |
| | DC VOLTAGE | 5V | 12V | -12V | -5V | 5V | 15V | -15V | -5V | |
| | RATED CURRENT | 10A | 3A | 1A | 0.6A | 10A | 2.2A | 1A | 0.6A | |
| | CURRENT RANGE | 2 ~ 10A | 0.3 ~ 4A | 0.15 ~ 1A | 0 ~ 1A | 2 ~ 10A | 0.3 ~ 3A | 0.15 ~ 1A | 0 ~ 1A | |
| | RATED POWER (max.) | 101W | | | | 101W | | | | |
| | RIPPLE & NOISE (max.) Note.2 | 100mVp-p | 150mVp-p | 150mVp-p | 100mVp-p | 100mVp-p | 150mVp-p | 150mVp-p | 100mVp-p | |
| | VOLTAGE ADJ. RANGE | CH1:4.75 ~ 5.5V | | | | CH1:4.75 ~ 5.5V | | | | |
| | VOLTAGE TOLERANCE Note.3 | 3.0% | 6.0% | +10,-6% | 5.0% | 3.0% | +6,-10% | 8.0% | 5.0% | |
| | LINE REGULATION | 1.0% | 2.0% | 2.0% | 1.0% | 1.0% | 2.0% | 2.0% | 1.0% | |
| | LOAD REGULATION | 2.0% | 6.0% | 6.0% | 2.0% | 2.0% | 2.0% | 6.0% | 2.0% | |
| | SETUP, RISE TIME | 1000ms, 50ms at full load | | | | | | | | |
| HOLD UP TIME (Typ.) | 24ms at full load | | | | | | | | | |
| INPUT | VOLTAGE RANGE Note.5 | 90 ~ 264VAC | | 127 ~ 370VDC | | | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | | | | |
| | POWER FACTOR (Typ.) | PF>0.95/230VAC | | PF>0.98/115VAC at full load | | | | | | |
| | EFFICIENCY (Typ.) | 76% | | | | 77% | | | | |
| | AC CURRENT (Typ.) | 1.5A/115VAC | | 0.75A/230VAC | | | | | | |
| | INRUSH CURRENT (Typ.) | COLD START 40A | | | | | | | | |
| | LEAKAGE CURRENT | <3.5mA / 240VAC | | | | | | | | |
| PROTECTION | OVERLOAD | 105 ~ 135% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed | | | | | | | | |
| | OVER VOLTAGE | CH1:5.75 ~ 6.75V 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 | 139.9K hrs min. MIL-HDBK-217F (25°C) | | | | | | | | |
| | DIMENSION | 199*99*50mm (L*W*H) | | | | | | | | |
| | PACKING | 1.1Kg; 20pcs/22Kg/1.28CUFT | | | | | | | | |
| NOTE | <ol style="list-style-type: none"> 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 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. 5. Derating may be needed under low input voltages. Please check the derating curve for more details. | | | | | | | | | |

File Name:QP-100B,C-SPEC 2007-10-25

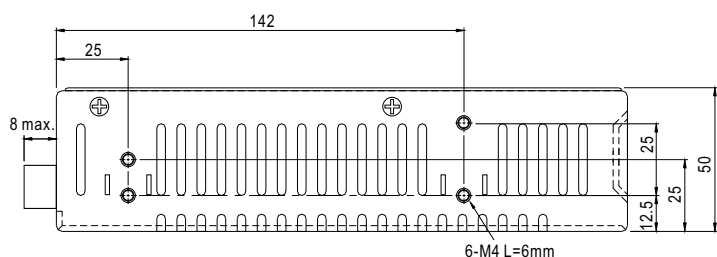
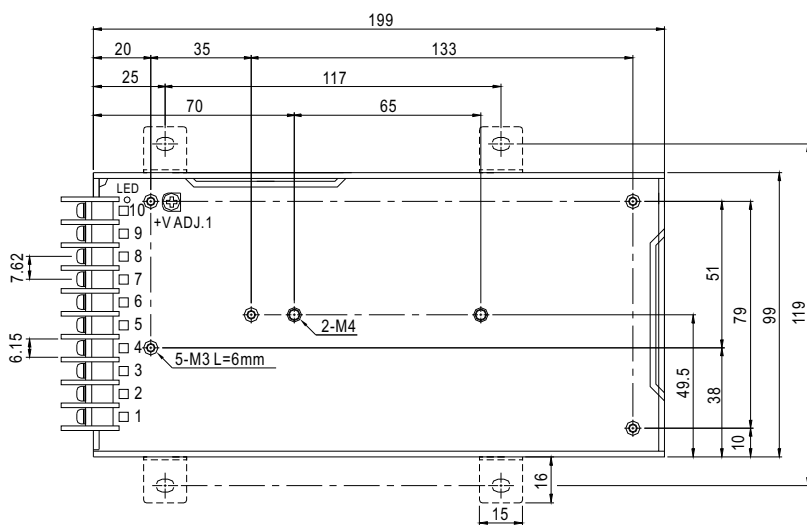


100W Quad Output with PFC Function

QP-100B,C series

Mechanical Specification

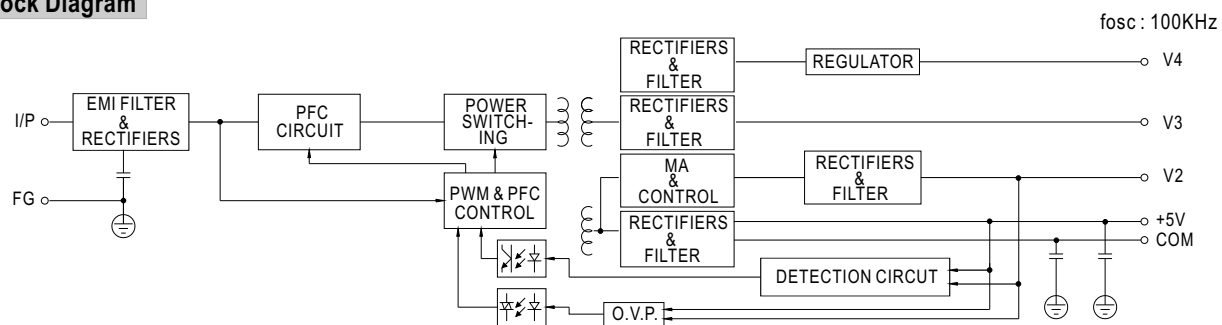
Case No. 916A Unit:mm



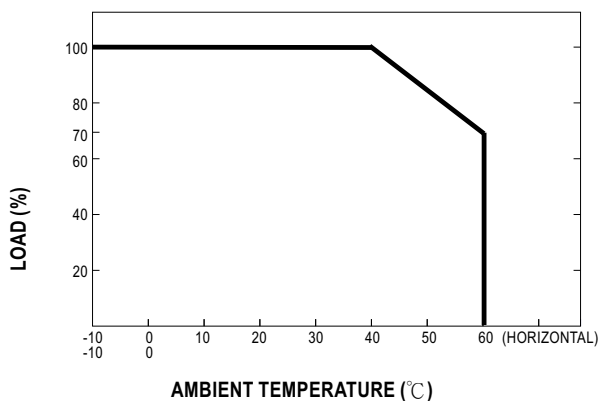
Terminal Pin No. Assignment :

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

Block Diagram



Derating Curve



Output Derating VS Input Voltage

