



320W Quad Output with PFC Function

QP-320 series



■ Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protections: Short circuit / Overload / Over voltage / Over temperature
- CH1 & CH2 can be adjusted from -5% ~ +10%
- With power good and fail signal output
- Built-in remote sense function for CH1 & CH2
- LED indicator for power on
- 100% full load burn-in test
- 20A peak load capability for 24V channel
- 3 years warranty

User's Manual



UL62368-1

BS EN/EN62368-1

TPTC004

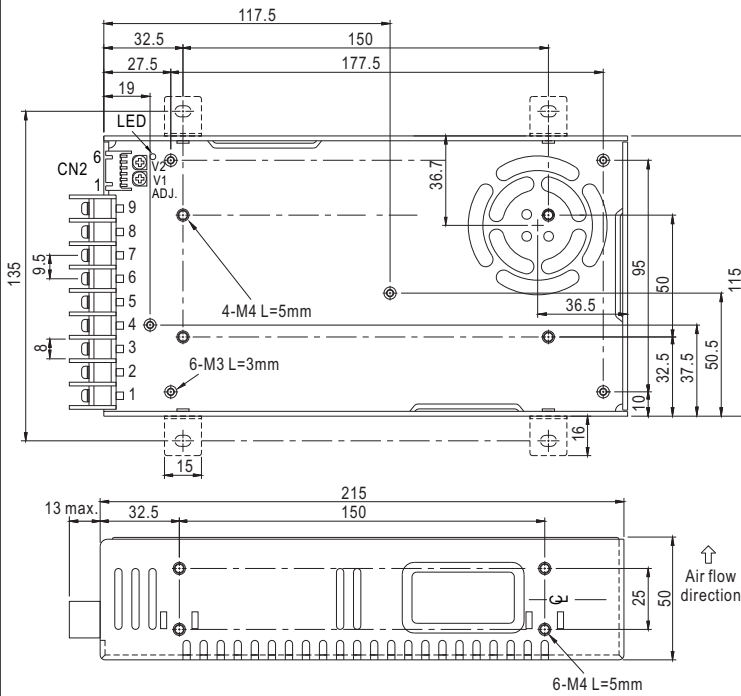
SPECIFICATION

| MODEL | | QP-320D | | | | QP-320F | | | |
|--------------------------|--|---|----------|------------------|----------|-----------|----------|------------------|------------|
| OUTPUT | OUTPUT NUMBER | CH1 | CH2 | CH3 | CH4 | CH1 | CH2 | CH3 | CH4 |
| | DC VOLTAGE | 5V | 12V | 24V | -12V | 5V | 15V | 24V | -15V |
| | RATED CURRENT | 20A | 10A | 3A | 2A | 20A | 8A | 3A | 1.6A |
| | CURRENT RANGE | 2.5 ~ 20A | 0 ~ 10A | 0.2 ~ 5A | 0.2 ~ 2A | 2.5 ~ 20A | 0 ~ 10A | 0.2 ~ 5A | 0.2 ~ 1.6A |
| | PEAK CURRENT | 20A | 10A | 20A, ≤1ms(Note5) | 2A | 20A | 10A | 20A, ≤1ms(Note5) | 1.6A |
| | RATED POWER | 316W | | | | | | | |
| | RIPPLE & NOISE (max.) Note.2 | 100mVp-p | 150mVp-p | 150mVp-p | 150mVp-p | 100mVp-p | 150mVp-p | 150mVp-p | 150mVp-p |
| | VOLTAGE ADJ. RANGE | CH1,2: +10, -5% | | | | | | | |
| | VOLTAGE TOLERANCE Note.3 | ±3.0% | ±3.0% | +10, -6% | ±10% | ±3.0% | ±3.0% | +10, -6% | ±10% |
| | LINE REGULATION | ±1.0% | ±2.0% | ±2.0% | ±3.0% | ±1.0% | ±2.0% | ±2.0% | ±3.0% |
| | LOAD REGULATION | ±2.0% | ±3.0% | ±6.0% | ±8.0% | ±2.0% | ±3.0% | ±6.0% | ±8.0% |
| | SETUP, RISE TIME | 800ms,50ms/230VAC 3000ms,50ms/115VAC at full load | | | | | | | |
| HOLD UP TIME (Typ.) | 16ms at full load | | | | | | | | |
| INPUT | VOLTAGE RANGE | 90 ~ 264VAC 127 ~ 370VDC | | | | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | | | |
| | POWER FACTOR (Typ.) | PF>0.95/230VAC PF>0.98/115VAC at full load | | | | | | | |
| | EFFICIENCY (Typ.) | 83% | | | | | | | |
| | AC CURRENT (Typ.) | 4A/115VAC 2A/230VAC | | | | | | | |
| | INRUSH CURRENT (Typ.) | 25A/115VAC 45A/230VAC | | | | | | | |
| | LEAKAGE CURRENT | <2mA / 240VAC | | | | | | | |
| PROTECTION | OVERLOAD | 105 ~ 150% rated output power Protection type : Fold back current limiting, recovers automatically after fault condition is removed | | | | | | | |
| | OVER VOLTAGE | 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 | Shut down o/p voltage, recovers automatically after temperature goes down | | | | | | | |
| | FUNCTION | POWER GOOD / POWER FAIL | 10ms/1ms | | | | | | |
| ENVIRONMENT | WORKING TEMP. | -10 ~ +70℃ (Refer to "Derating Curve") | | | | | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | | | | | |
| | STORAGE TEMP., HUMIDITY | -20 ~ +85℃, 10 ~ 95% RH non-condensing | | | | | | | |
| | TEMP. COEFFICIENT | ±0.03%/℃ (0 ~ 50℃) | | | | | | | |
| | VIBRATION | 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes | | | | | | | |
| SAFETY & EMC (Note 6) | SAFETY STANDARDS | UL62368-1, TUV BS EN/EN62368-1, EAC TP TC 004 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℃ / 70% RH | | | | | | | |
| | EMC EMISSION | Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2,-3, EAC TP TC 020 | | | | | | | |
| | EMC IMMUNITY | Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55024, light industry level, criteria A, EAC TP TC 020 | | | | | | | |
| OTHERS | MTBF | 213.5K hrs min. MIL-HDBK-217F (25℃) | | | | | | | |
| | DIMENSION | 215*115*50mm (L*W*H) | | | | | | | |
| | PACKING | 1.2Kg; 12pcs/15.4Kg/0.9CUFT | | | | | | | |
| NOTE | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ 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. Every output channel can provide up to the maximum current, but total load can't exceed the rated output power. 5. CH3(24V) peak current 20A, ≤1ms, repeatable in every 100ms. CH3(24V) output must be above 16V in the period of peak current. 6. 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 http://www.meanwell.com) 7. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft). ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx | | | | | | | | |

File Name:QP-320-SPEC 2021-09-16

Case No. 912I Unit:mm

Mechanical Specification



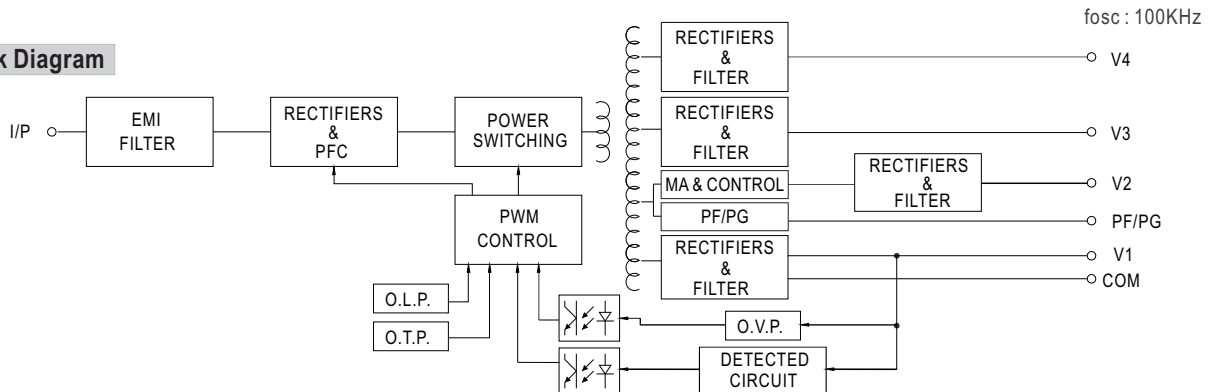
Terminal Pin No. Assignment

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

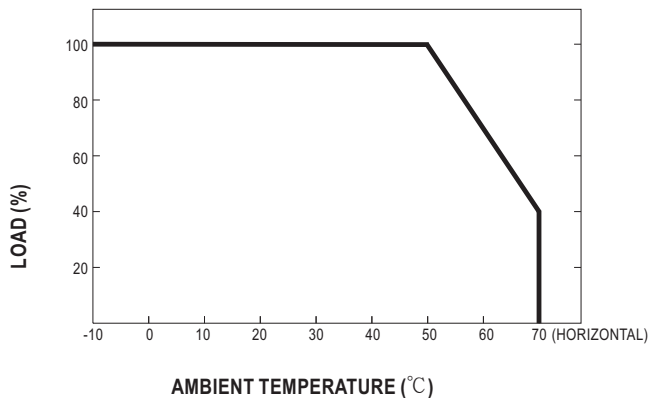
DC Output Connector (CN2) : JST S6B-XH-A-1 or equivalent

| Pin No. | Assignment | Pin No. | Assignment | Mating Housing | Terminal |
|---------|------------|---------|------------|-----------------------|---------------------------------|
| 1 | V1(+S) | 4 | V2(-S) | JST XHP or equivalent | JST SXH-001T-P0.6 or equivalent |
| 2 | V1(-S) | 5 | PF/PG | | |
| 3 | V2(+S) | 6 | GND | | |

Block Diagram



Derating Curve



Output Derating VS Input Voltage

