



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



■ GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>



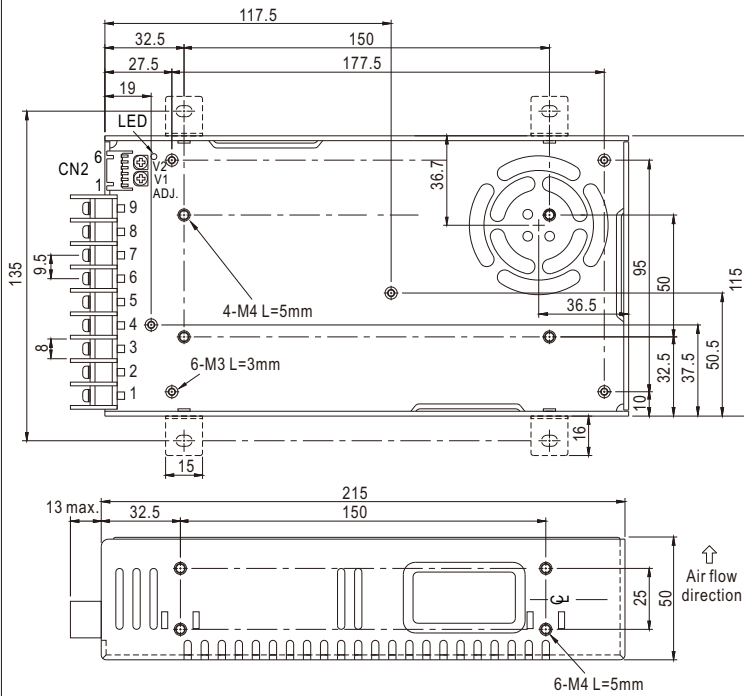
UL62368-1 BS EN/EN62368-1 TPTC004

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°C (Refer to "Derating Curve") | | | | | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | | | | | |
| | STORAGE TEMP., HUMIDITY | -20 ~ +85°C, 10 ~ 95% RH non-condensing | | | | | | | |
| | TEMP. COEFFICIENT | ±0.03%/°C (0 ~ 50°C) | | | | | | | |
| | 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°C / 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, EAC TP TC 020 | | | | | | | |
| OTHERS | MTBF | 1477.2K hrs min. Telcordia SR-332 (Bellcore) ; 213.6K hrs min. MIL-HDBK-217F (25°C) | | | | | | | |
| | DIMENSION | 215*115*50mm (L*W*H) | | | | | | | |
| | PACKING | 1.2Kg; 12pcs/15.4Kg/0.9CUFT | | | | | | | |
| 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. Every output channel can provide up to the maximum current, but total load can't exceed the rated output power.</p> <p>5. CH3(24V) peak current 20A, ≤1ms, repeatable in every 100ms. CH3(24V) output must be above 16V in the period of peak current.</p> <p>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)</p> <p>7. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx</p> | | | | | | | | |

Mechanical Specification

Case No. 912I Unit:mm



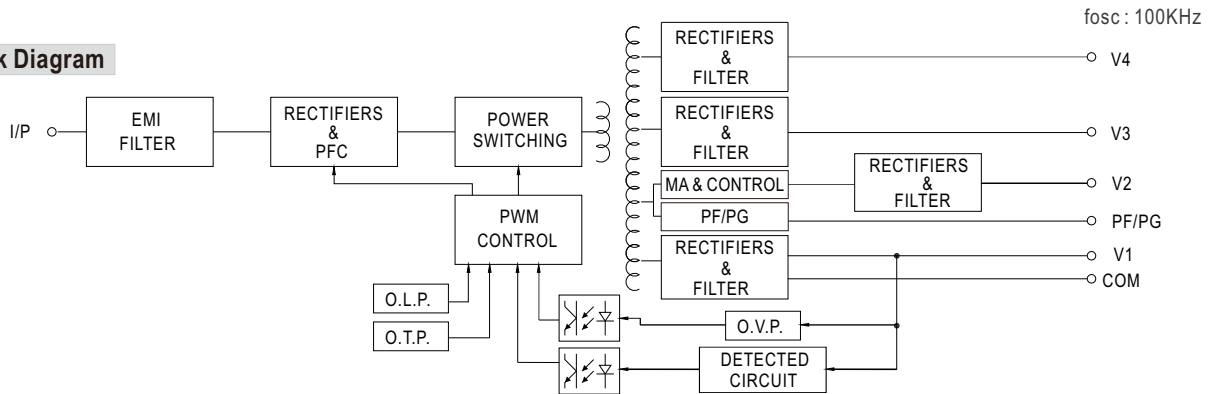
Terminal Pin No. Assignment

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

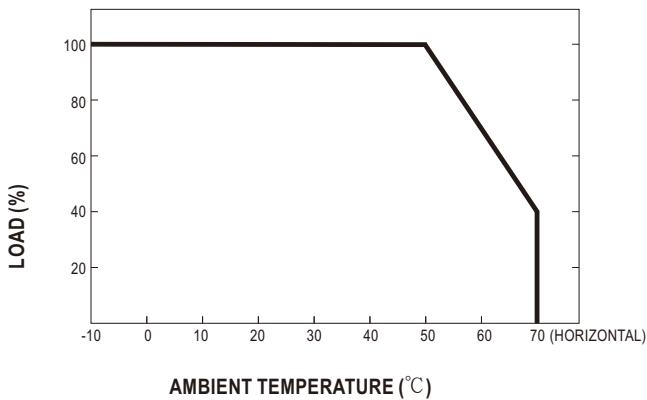
DC Output Connector (CN2) : JST S6B-XH-A-1 or equivalent

| 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

