



## 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(Notes) | 2A       | 20A       | 10A      | 20A, ≤1ms(Notes) | 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<br>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<br>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/EN55035, 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 &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 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 <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</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 <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></p> |  |          |                  |          |           |          |                  |            |

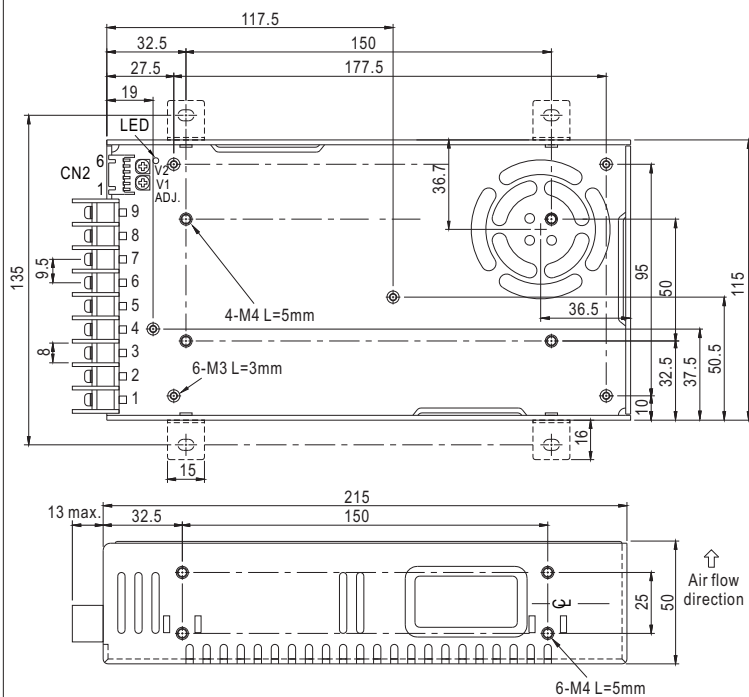


## 320W Quad Output with PFC Function

# QP-320 series

Case No. 912I Unit:mm

### Mechanical Specification



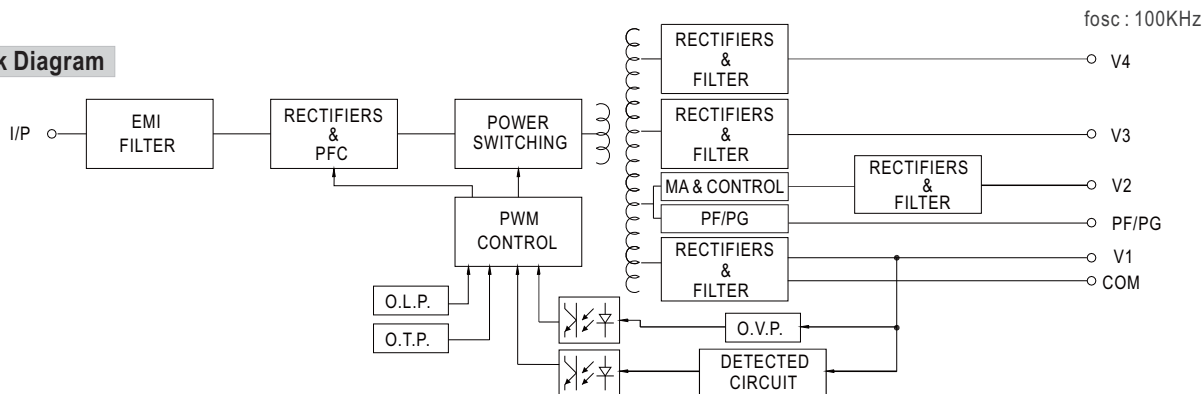
### Terminal Pin No. Assignment

| 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  |

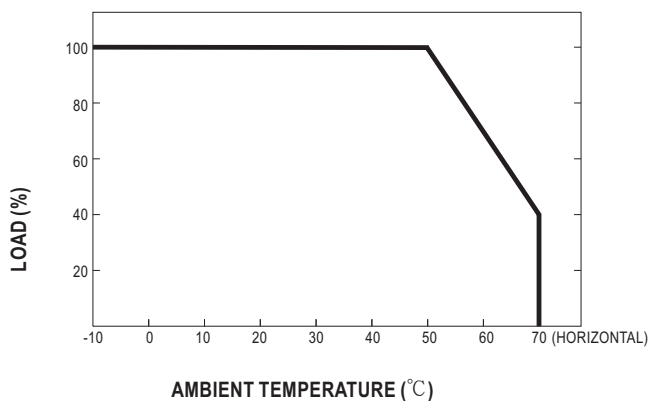
DC Output Connector (CN2) : JST S6B-XH-A-1 or equivalent

| 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

