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**320W Enclosed type Quad output power supply > QP-320**



■ 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



**SPECIFICATION**

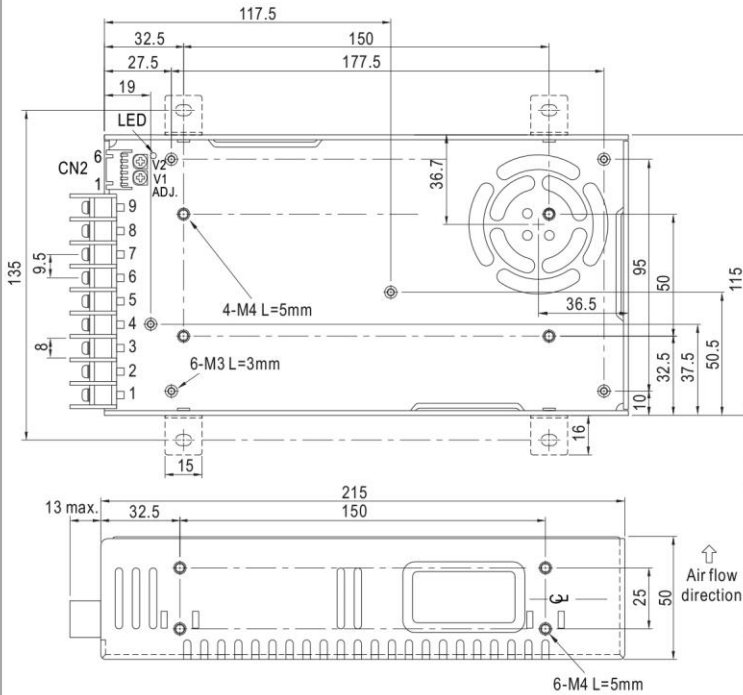
MODEL		QP-320D				QP-320F				
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4	
	DC VOLTAGE	5V	12V	24V	-12V	5V	15V	24V	-15V	
	RATED CURRENT	20A	10A	3A	2A	20A	8A	3A	1.6A	
	CURRENT RANGE	2.5 ~ 20A	0 ~ 10A	0.2 ~ 5A	0.2 ~ 2A	2.5 ~ 20A	0 ~ 10A	0.2 ~ 5A	0.2 ~ 1.6A	
	PEAK CURRENT	20A	10A	20A, ≤1ms(Notes)	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 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				
	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 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 EN55032 (CISPR32) Class B, EN61000-3-2,-3, EAC TP TC 020								
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A, EAC TP TC 020								
OTHERS	MTBF	213.5K hrs min. MIL-HDBK-217F (25°C)								
	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°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. 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." 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).									



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**Mechanical Specification**

Case No. 9121 Unit:mm



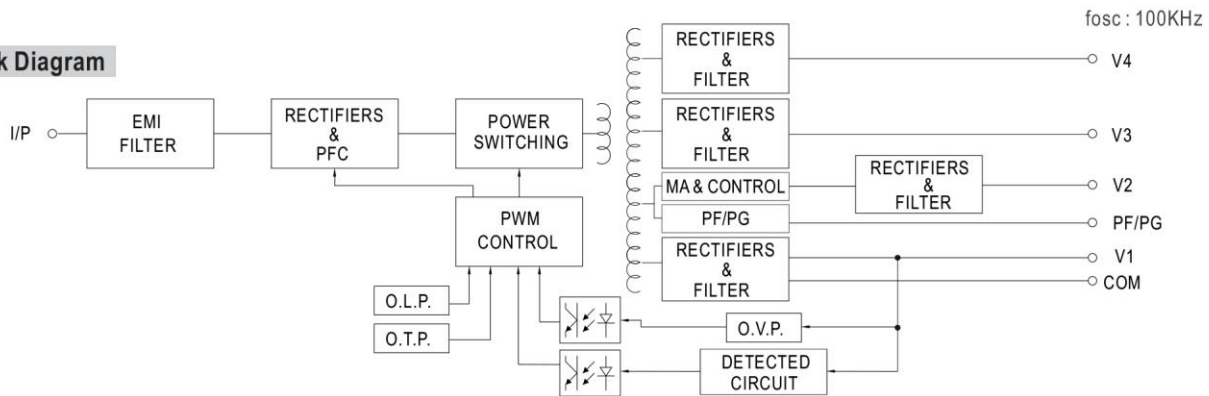
**Terminal Pin No. Assignment**

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

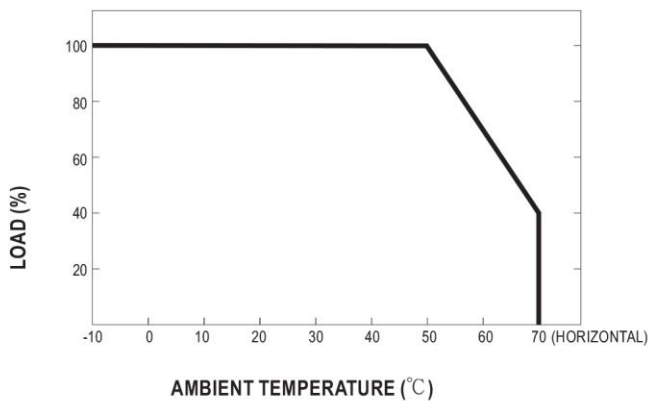
DC Output Connector (CN2) : JST S6B-XH-A-1 or equivalent

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**

