

200W Quad Output with PFC Function

QP-200 series



■ Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Forced air cooling by built-in DC fan
- CH1,2 can be adjustable from -5~+10%
- With power good and fail signal output(Optional)
- Built-in remote sense function for CH1,2
- 100% full load burn-in test
- CH4 can set to positive after consult us before delivery(Optional)
- Fixed switching frequency at PFC:67KHz PWM:134KHz
- 3 years warranty



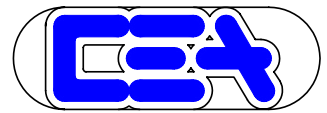
SPECIFICATION

MODEL	QP-200D				QP-200F				QP-200-3A				
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4
	DC VOLTAGE	5V	12V	24V	-12V	5V	15V	24V	-15V	5V	3.3V	12V	-5V
	RATED CURRENT	15A	4A	3A	0.7A	15A	3A	3A	0.7A	15A	15A	6A	0.7A
	CURRENT RANGE	3 ~ 20A	0 ~ 6A	0.4 ~ 5A	0 ~ 1A	3 ~ 20A	0 ~ 5A	0.4 ~ 5A	0 ~ 1A	3 ~ 20A	0 ~ 20A	0.5 ~ 8A	0 ~ 1A
	RATED POWER	203.4W				202.5W				200W			
	PEAK CURRENT <small>Note.4</small>	20A	7A	6A	1A	20A	6A	6A	1A	20A	20A	8A	1A
	RIPPLE & NOISE (max.) <small>Note.2</small>	100mVp-p	150mVp-p	150mVp-p	150mVp-p	100mVp-p	150mVp-p	150mVp-p	150mVp-p	100mVp-p	100mVp-p	150mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	CH1: 4.75 ~ 5.5V		CH2: 11.4 ~ 13.2V		CH1: 4.75 ~ 5.5V		CH2: 14.25 ~ 16.5V		CH1: 4.75 ~ 5.5V		CH2: 3.14 ~ 3.63V	
	VOLTAGE TOLERANCE <small>Note.3</small>	±3.0%	±3.0%	+10,-6%	±6.0%	±3.0%	±3.0%	+10,-6%	±6.0%	±3.0%	±3.0%	+8,-10%	±6.0%
	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 at full load												
HOLD UP TIME (Typ.)	24ms at full load												
INPUT	VOLTAGE RANGE <small>Note.6</small>	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%				75%				72%			
	AC CURRENT (Typ.)	3.5A/115VAC		2A/230VAC									
	INRUSH CURRENT (Typ.)	COLD START 30A											
	LEAKAGE CURRENT	<2mA / 240VAC											
PROTECTION	OVERLOAD	105 ~ 150% rated output power Protection type : Constant 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				CH1:5.75 ~ 6.75V CH2:3.8 ~ 4.4V			
	OVER TEMPERATURE	Shut down o/p voltage, recovers automatically after temperature goes down											
FUNCTION	POWER GOOD / POWER FAIL(OPTIONAL)	10ms/1ms											
ENVIRONMENT	WORKING TEMP.	-10 ~ +60°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 <small>(Note 5)</small>	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 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											
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A											
OTHERS	MTBF	160.6K hrs min. MIL-HDBK-217F (25°C)											
	DIMENSION	215*115*50mm (L*W*H)											
	PACKING	1.2Kg; 12pcs/15.4Kg/0.92CUFT											
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. 33.3% Duty cycle maximum within every 30 seconds. Average output power should not exceed the rated power. 5. 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) 6. Derating may be needed under low input voltages. Please check the derating curve for more details. 												

File Name:QP-200-SPEC 2017-07-14



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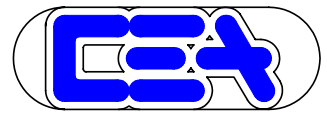
SPECIFICATION

MODEL		QP-200-3B				QP-200-3C				QP-200-3D			
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4
	DC VOLTAGE	5V	3.3V	12V	-12V	5V	3.3V	15V	-15V	5V	3.3V	24V	-12V
	RATED CURRENT	15A	15A	6A	0.7A	15A	15A	5A	0.7A	10A	15A	4A	0.7A
	CURRENT RANGE	3 ~ 20A	0 ~ 20A	0.5 ~ 8A	0 ~ 1A	3 ~ 20A	0 ~ 20A	0.5 ~ 6A	0 ~ 1A	3 ~ 15A	0 ~ 20A	0.4 ~ 5A	0 ~ 1A
	RATED POWER	204.9W				210W				203.9W			
	PEAK CURRENT <small>Note.4</small>	20A	20A	8A	1A	20A	20A	7A	1A	20A	20A	6A	1A
	RIPPLE & NOISE (max.) <small>Note.2</small>	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 <small>Note.3</small>	±3.0%	±3.0%	+8,-10%	±6.0%	±3.0%	±3.0%	+10,-6%	±6.0%	±3.0%	±3.0%	+10,-6%	±6.0%
	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 at full load												
HOLD UP TIME (Typ.)	24ms at full load												
INPUT	VOLTAGE RANGE <small>Note.6</small>	90 ~ 264VAC		127 ~ 370VDC									
	FREQUENCY RANGE	47 ~ 63Hz											
	POWER FACTOR (Typ.)	PF>0.95/230VAC		PF>0.98/115VAC at full load									
	EFFICIENCY (Typ.)	72%				72%				74%			
	AC CURRENT (Typ.)	3.5A/115VAC		2A/230VAC									
	INRUSH CURRENT (Typ.)	COLD START 30A											
	LEAKAGE CURRENT	<2mA / 240VAC											
PROTECTION	OVERLOAD	105 ~ 150% rated output power Protection type : Constant current limiting, 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	Shut down o/p voltage, recovers automatically after temperature goes down											
FUNCTION	POWER GOOD / POWER FAIL(OPTIONAL)	10ms/1ms											
ENVIRONMENT	WORKING TEMP.	-10 ~ +60°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 5)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 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											
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A											
OTHERS	MTBF	160.6K hrs min. MIL-HDBK-217F (25°C)											
	DIMENSION	215*115*50mm (L*W*H)											
	PACKING	1.2Kg; 12pcs/15.4Kg/0.92CUFT											
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. 33.3% Duty cycle maximum within every 30 seconds. Average output power should not exceed the rated power. 5. 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) 6. Derating may be needed under low input voltages. Please check the derating curve for more details. 												

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- 100% full load burn-in test
- CH4 can set to positive after consult us before delivery(Optional)
- Fixed switching frequency at PFC:67KHz PWM:134KHz
- 3 years warranty



SPECIFICATION

MODEL		QP-200-3E			
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH3	CH4
	DC VOLTAGE	5V	3.3V	24V	-15V
	RATED CURRENT	10A	15A	4A	0.7A
	CURRENT RANGE	3 ~ 15A	0 ~ 20A	0.4 ~ 5A	0 ~ 1A
	RATED POWER	206W			
	PEAK CURRENT <small>Note.4</small>	20A	20A	6A	1A
	RIPPLE & NOISE (max.) <small>Note.2</small>	100mVp-p		150mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	CH1: 4.75 ~ 5.5V		CH2: 3.14 ~ 3.63V	
	VOLTAGE TOLERANCE <small>Note.3</small>	±3.0%		+10,-6%	±6.0%
	LINE REGULATION	±1.0%		±2.0%	±1.0%
	LOAD REGULATION	±2.0%		±6.0%	±2.0%
	SETUP, RISE TIME	800ms, 50ms at full load			
HOLD TIME (Typ.)	24ms at full load				
INPUT	VOLTAGE RANGE <small>Note.6</small>	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%			
	AC CURRENT (Typ.)	3.5A/115VAC		2A/230VAC	
	INRUSH CURRENT (Typ.)	COLD START 30A			
	LEAKAGE CURRENT	<2mA / 240VAC			
PROTECTION	OVERLOAD	105 ~ 150% rated output power Protection type : Constant current limiting, 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	Shut down o/p voltage, recovers automatically after temperature goes down			
FUNCTION	POWER GOOD / POWER FAIL(OPTIONAL)	10ms/1ms			
ENVIRONMENT	WORKING TEMP.	-10 ~ +60°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 <small>(Note 5)</small>	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 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			
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, light industry level, criteria A			
OTHERS	MTBF	160.6K hrs min. MIL-HDBK-217F (25°C)			
	DIMENSION	215*115*50mm (L*W*H)			
	PACKING	1.2Kg; 12pcs/15.4Kg/0.92CUFT			
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. 33.3% Duty cycle maximum within every 30 seconds. Average output power should not exceed the rated power. 5. 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) 6. Derating may be needed under low input voltages. Please check the derating curve for more details. 				

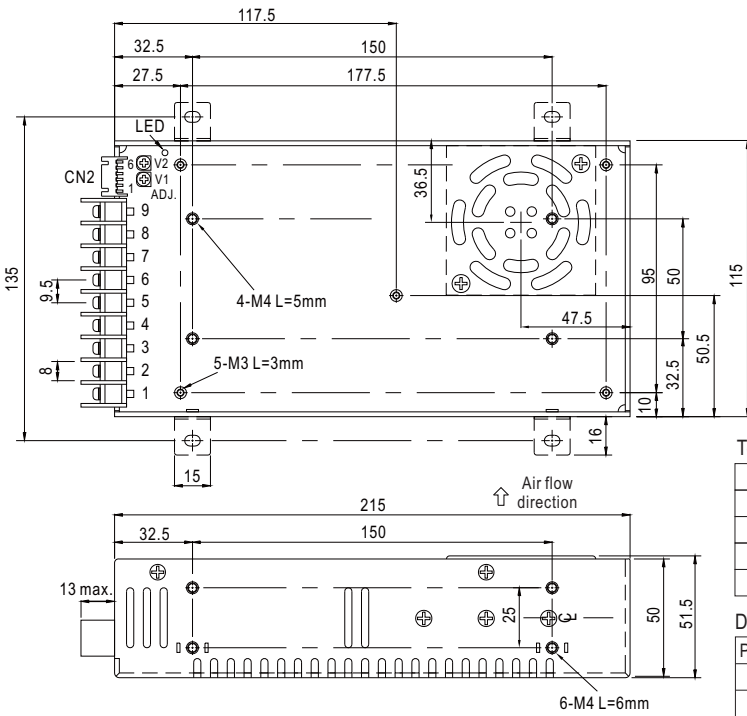
File Name:QP-200-SPEC 2017-07-14



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Case No. 912B Unit:mm

Mechanical Specification



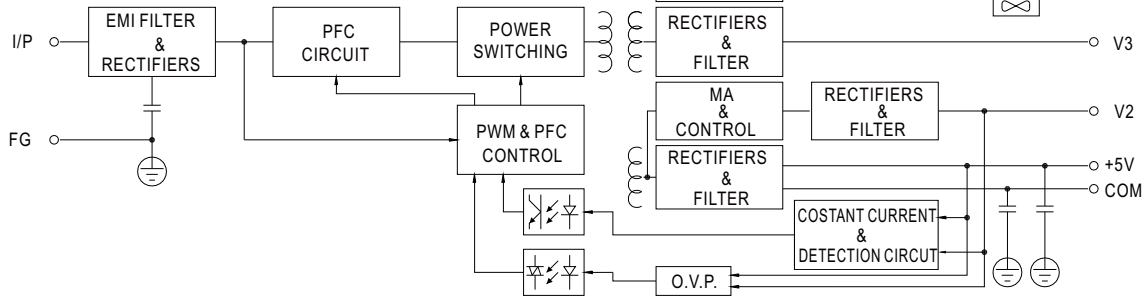
Terminal Pin No. Assignment

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

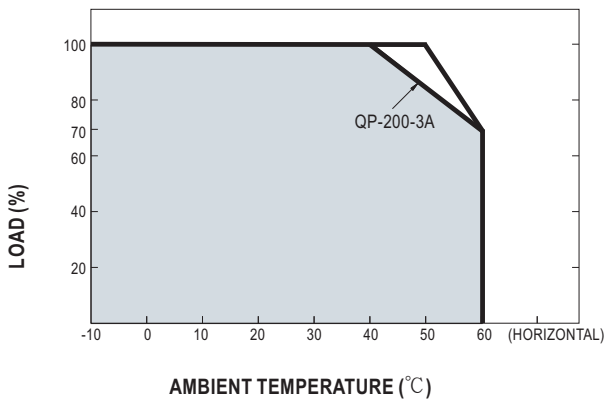
DC Output Connector (CN2) : JST S6B-XH-A-1 or equivalent

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

