



150W Quad Output with PFC Function

QP-150 series



■ Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protections: Short circuit / Over load / Over voltage
- Forced air cooling by built-in DC fan
- CH4: ±Polarity is selectable
- Fixed switching frequency at 100KHz
- 3 years warranty

User's Manual



■ GTIN CODE

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

SPECIFICATION

MODEL		QP-150-3A				QP-150-3B				QP-150-3C			
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4
	DC VOLTAGE	5V	3.3V	12V	-5V	5V	3.3V	12V	-12V	5V	3.3V	15V	-15V
	RATED CURRENT	10A	10A	5A	0.6A	10A	10A	5A	0.6A	10A	10A	4A	0.6A
	CURRENT RANGE	3 ~ 15A	0 ~ 15A	0.4 ~ 5A	0 ~ 1A	3 ~ 15A	0 ~ 15A	0.4 ~ 5A	0 ~ 1A	3 ~ 15A	0 ~ 15A	0.4 ~ 5A	0 ~ 1A
	RATED POWER (max.)	146W				150.2W				152W			
	RIPPLE & NOISE (max.) Note.2	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 Note.3	± 3.0%	± 3.0%	± 6.0%	± 5.0%	± 3.0%	± 3.0%	± 6.0%	± 5.0%	± 3.0%	± 3.0%	+8,-6%	± 5.0%
	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/230VAC 1800ms, 50ms/115VAC at full load												
HOLD UP TIME (Typ.)	24ms/230VAC 24ms/115VAC 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.)	73%					75%					74%	
	AC CURRENT (Typ.)	2.5A/115VAC		1.2A/230VAC									
	INRUSH CURRENT (Typ.)	COLD START ≤40A/230V											
	LEAKAGE CURRENT	<3.5mA / 240VAC											
PROTECTION	OVERLOAD	105 ~ 150% rated output power Protection type : Hiccup mode, 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(OPTION)	Shut down o/p voltage, recovers automatically after temperature goes down											
ENVIRONMENT	WORKING TEMP.	-10 ~ +60℃ (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 4)	SAFETY STANDARDS	UL60950-1, 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/EN55035, light industry level, EAC TP TC 020											
OTHERS	MTBF	1763.3K hrs min. Telcordia SR-332 (Bellcore) ; 262.6K hrs min. MIL-HDBK-217F (25℃)											
	DIMENSION	199*99*50mm (L*W*H)											
	PACKING	0.93Kg; 20pcs/19.6Kg/1.21CUFT											
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 0.1 μ F & 47 μ F parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. 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 https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf) 5. 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												



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SPECIFICATION

MODEL		QP-150-3D				QP-150D				QP-150F			
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4
	DC VOLTAGE	5V	3.3V	24V	-12V	5V	12V	24V	-12V	5V	15V	24V	-15V
	RATED CURRENT	10A	10A	2.5A	0.6A	10A	4A	2A	0.6A	10A	3A	2A	0.6A
	CURRENT RANGE	3 ~ 15A	0 ~ 15A	0.3 ~ 3A	0 ~ 1A	3 ~ 15A	0 ~ 5A	0.4 ~ 3A	0 ~ 1A	3 ~ 15A	0 ~ 5A	0.4 ~ 3A	0 ~ 1A
	RATED POWER (max.)	150.2W				153.2W				152W			
	RIPPLE & NOISE (max.) Note.2	100mVp-p	100mVp-p	150mVp-p	150mVp-p	120mVp-p	150mVp-p	200mVp-p	150mVp-p	120mVp-p	150mVp-p	200mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	CH1: 4.75 ~ 5.5V		CH2: 3.14 ~ 3.63V		CH1: 4.75 ~ 5.5V		CH2: 11.4 ~ 13.2V		CH1: 4.75 ~ 5.5V		CH2: 14.3 ~ 16.5V	
	VOLTAGE TOLERANCE Note.3	± 3.0%	± 3.0%	± 6.0%	± 5.0%	± 3.0%	± 3.0%	± 6.0%	± 5.0%	± 3.0%	± 3.0%	± 6.0%	± 5.0%
	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%
INPUT	SETUP, RISE TIME	800ms, 50ms/230VAC				1800ms, 50ms/115VAC at full load							
	HOLD UP TIME (Typ.)	24ms/230VAC		24ms/115VAC at full load									
	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.)	76%					78%					78%	
	AC CURRENT (Typ.)	2.5A/115VAC		1.2A/230VAC									
	INRUSH CURRENT (Typ.)	COLD START ≤40A/230V											
PROTECTION	LEAKAGE CURRENT	<3.5mA / 240VAC											
	OVERLOAD	105 ~ 150% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed											
	OVER VOLTAGE	CH1:5.75 ~ 6.75V		CH2:3.8 ~ 4.4V		CH1:5.75 ~ 6.75V		CH2:13.8 ~ 16.2V		CH1:5.75 ~ 6.75V		CH2:17.25 ~ 20.25V	
	OVER TEMPERATURE(OPTION)	Protection type : Shut down o/p voltage, re-power on to recover Shut down o/p voltage, recovers automatically after temperature goes down											
ENVIRONMENT	WORKING TEMP.	-10 ~ +60℃ (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℃)											
SAFETY & EMC (Note 4)	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes											
	SAFETY STANDARDS	UL60950-1, 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/EN55035, light industry level, EAC TP TC 020											
OTHERS	MTBF	1763.3K hrs min. Telcordia SR-332 (Bellcore) ; 262.6K hrs min. MIL-HDBK-217F (25℃)											
	DIMENSION	199*99*50mm (L*W*H)											
	PACKING	0.93Kg; 20pcs/19.6Kg/1.21CUFT											
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 0.1 μ F & 47 μ F parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. 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 https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf) 5. 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												



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SPECIFICATION

MODEL		QP-150B				QP-150C			
OUTPUT	OUTPUT NUMBER	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4
	DC VOLTAGE	5V	12V	-12V	-5V	5V	15V	-15V	-5V
	RATED CURRENT	15A	4A	2A	0.6A	15A	3A	2A	0.6A
	CURRENT RANGE	3 ~ 15A	0.4 ~ 5A	0.3 ~ 2A	0 ~ 1A	3 ~ 15A	0.4 ~ 4A	0.3 ~ 2A	0 ~ 1A
	RATED POWER (max.)	150W				153W			
	RIPPLE & NOISE (max.) Note.2	100mVp-p	150mVp-p	150mVp-p	100mVp-p	100mVp-p	150mVp-p	150mVp-p	100mVp-p
	VOLTAGE ADJ. RANGE	CH1:4.75 ~ 5.5V				CH1:4.75 ~ 5.5V			
	VOLTAGE TOLERANCE Note.3	± 3.0%	± 6.0%	+10,-6%	± 5.0%	± 3.0%	+6,-10%	± 8.0%	± 5.0%
	LINE REGULATION	± 1.0%	± 2.0%	± 2.0%	± 1.0%	± 1.0%	± 2.0%	± 2.0%	± 1.0%
	LOAD REGULATION	± 2.0%	± 6.0%	± 6.0%	± 2.0%	± 2.0%	± 6.0%	± 6.0%	± 2.0%
INPUT	SETUP, RISE TIME	1000ms, 50ms/230VAC				2200ms, 50ms/115VAC at full load			
	HOLD UP TIME (Typ.)	24ms at full load							
	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.)	76%				77%			
	AC CURRENT (Typ.)	2.5A/115VAC 1.2A/230VAC							
	INRUSH CURRENT (Typ.)	COLD START ≤40A							
PROTECTION	LEAKAGE CURRENT	<3.5mA / 240VAC							
	OVERLOAD	105 ~ 135% rated output power							
		Protection type : Hiccup mode, recovers automatically after fault condition is removed							
ENVIRONMENT	OVER VOLTAGE	CH1:5.75 ~ 6.75V							
		Protection type : Shut down o/p voltage, re-power on to recover							
	OVER TEMPERATURE(OPTION)	Shut down o/p voltage, recovers automatically after temperature goes down							
SAFETY & EMC (Note 4)	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)							
OTHERS	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes							
	SAFETY STANDARDS	UL60950-1, 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							
NOTE	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							
	MTBF	1763.3K hrs min. Telcordia SR-332 (Bellcore) ; 262.6K hrs min. MIL-HDBK-217F (25°C)							
	DIMENSION	199*99*50mm (L*W*H)							
OTHERS	PACKING	1.1Kg; 20pcs/22Kg/1.21CUFT							

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
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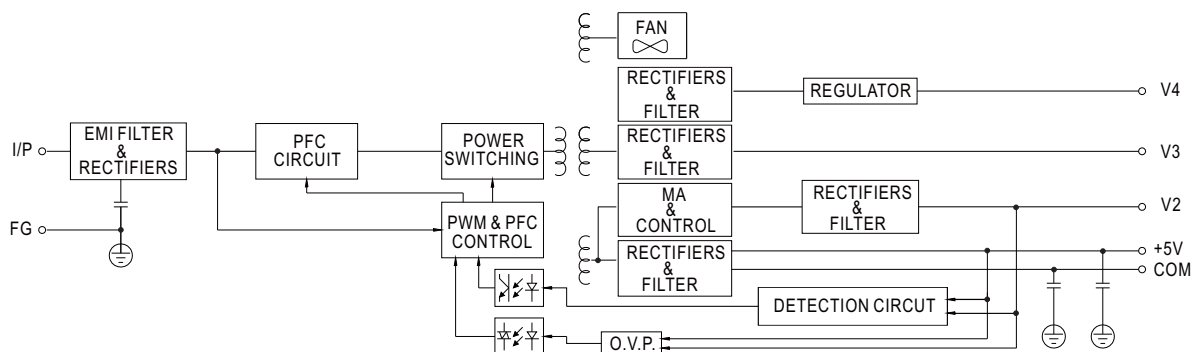
150W Quad Output with PFC Function

QP-150 series

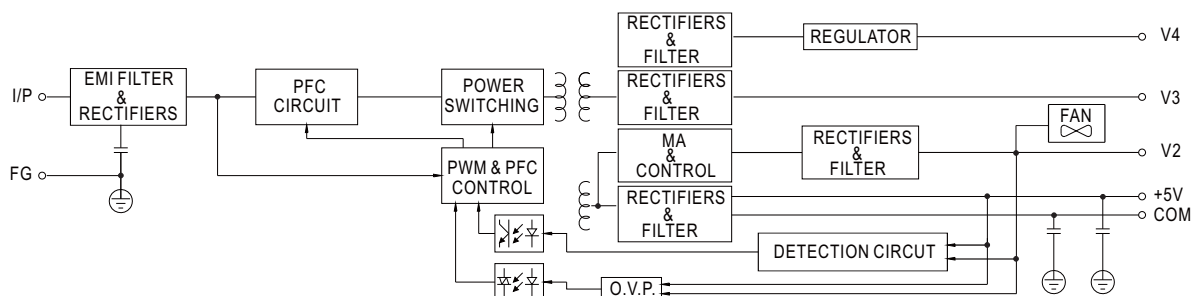
■ Block Diagram

※ QP-150-3A/3B/3C/3D, QP-150D/F

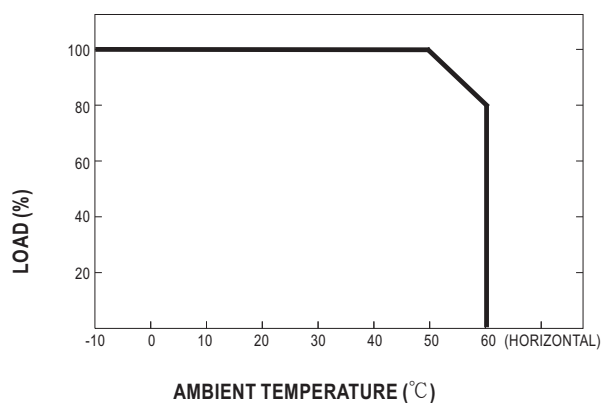
fosc: 100KHz



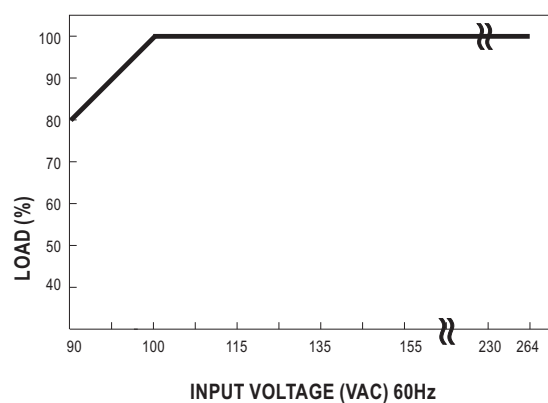
※ QP-150B/C



■ Derating Curve



■ Output Derating VS Input Voltage





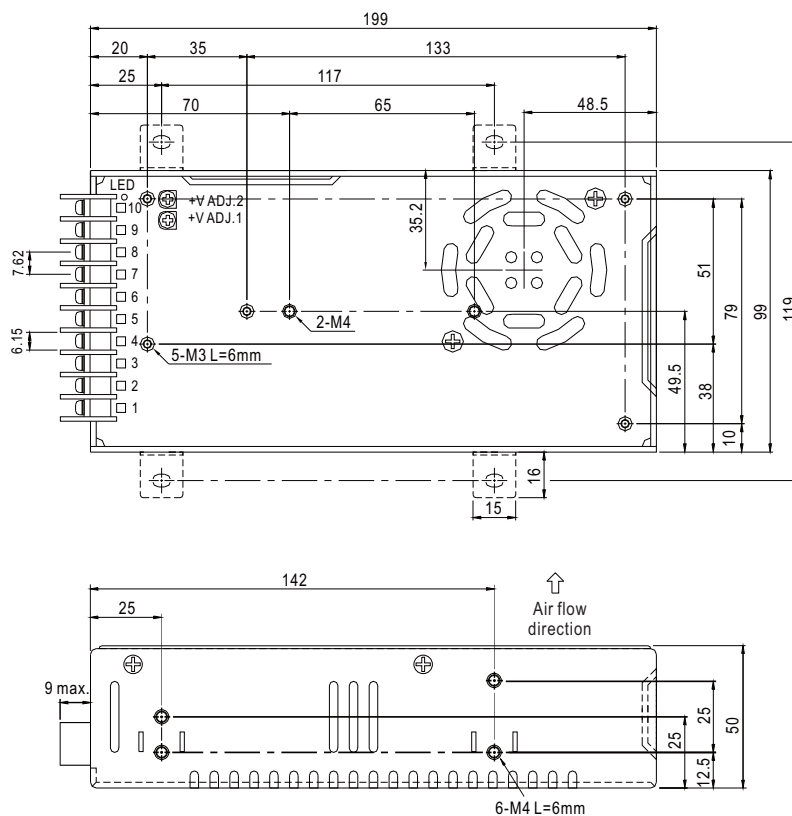
150W Quad Output with PFC Function

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■ Mechanical Specification

(Unit: mm , tolerance ± 1 mm)

Case No. 916B Unit:mm



Terminal Pin No. Assignment :

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	5	DC OUTPUT V3
2	AC/N	6,7	DC OUTPUT V1
3	FG \perp	8,9	DC OUTPUT COM
4	DC OUTPUT V4	10	DC OUTPUT V2

■ Installation Manual

Please refer to : <http://www.meanwell.com/manual.html>