



### Features:

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

### **SPECIFICATION**



OUTPUT NUMBER	MODEL		QP-100-3	A			QP-100-3	В			QP-100-3	С			
RATED CURRENT   SA   8A   2.5A   0.6A   8A   8.4   2.2A   0.6A   8A   8A   1.7A   0.6A		OUTPUT NUMBER	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4	CH1	CH2	CH3	CH4	
CURRENT RANGE   RATED POWER (max.)   99.4W   100W/pc    150mV/pc    150mV/pc		DC VOLTAGE	5V	3.3V	12V	-5V	5V	3.3V	12V	-12V	5V	3.3V	15V	-15V	
NATED POWER (max.)   99.4W   100mVp-p    150mVp-p		RATED CURRENT	8A	8A	2.5A	0.6A	8A	8A	2.2A	0.6A	8A	8A	1.7A	0.6A	
NATEO POWER (max.)   99.4W   100Wy-p  150mVy-p  150mVy		CURRENT RANGE	2 ~ 10A	0 ~ 10A	0.3 ~ 3A	0 ~ 1A	2 ~ 10A	0 ~ 10A	0.3 ~ 3A	0 ~ 1A	2 ~ 10A	0 ~ 10A	0.3 ~ 2A	0 ~ 1A	
NUTPUT   RIPPLE & NOISE (max.)   Nota.2   10mWp-p  150mWp-p  150			99.4W												
VOLTAGE ADJ. RANGE		, ,				150mVp-p						100mVp-r	150mVp-p	150mVp-r	
VOLTAGE TOLERANCE Note.2   33.0%   ±3.0%   ±5.0%   ±	OUTPUT	, ,													
LOAD REGULATION								Т	·	T					
SETUP, RISE TIME		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%	
HOLD TIME (Typ.)   24ms/230VAC   24ms/115VAC at full load		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%	
HOLD TIME (Typ.)   24ms/230VAC   24ms/115VAC at full load		SETUP, RISE TIME	800ms, 50ms/230VAC 800ms, 50ms/115VAC at full load												
VOLTAGE RANGE   Note.5   90 - 264VAC   127 - 370VDC															
INPUT   EFFICIENCY (Typ.)   PF>0.95/230VAC   PF>0.98/115VAC at full load		, , ,													
REFICIENCY (Typ.)   74%   74%   75%		FREQUENCY RANGE													
AC CURRENT (Typ.)  INRUSH CURRENT (Typ.)  INRUSH CURRENT (Typ.)  LEAKAGE CURRENT  OVER LOAD  Protection type: Hiccup mode, recovers automatically after fault condition is removed  OVER VOLTAGE  OVER VOLTAGE  OVER TEMPERATURE(OPTION)  OVER TEMPERATURE(OPTION)  Protection type: Shut down o/p voltage, re-power on to recover  OVER TEMPERATURE(OPTION)  OVER TEMPERATURE(OPTION)  Protection type: Shut down o/p voltage, re-power on to recover  OVER TEMPERATURE(OPTION)  Protection type: Shut down o/p voltage, re-power on to recover  OVER TEMPERATURE(OPTION)  WORKING TEMP.  -10 − +60°C (Refer to output load derating curve)  WORKING HUMIDITY  20 − 90% RH non-condensing  STORAGE TEMP, HUMIDITY  20 − 485°C, 10 − 95% RH  TEMP. COEFFICIENT  ±0.03%/°C (0−50°C)  VIBRATION  10 − 500°Hz, 26 10min./1cycle, 60min. each along X, Y, Z axes  SAFETY STANDARDS  UL60950-1, TUV EN60950-1 Approved  WITHSTAND VOLTAGE  IMP-O/P, IVP-FG, O/P-FG:105KVAC  O/P-FG:0.5KVAC  SAFETY & SOLATION RESISTANCE  EMC  (Note 4)  EMI CONDUCTION & RADIATION  Compliance to EN61000-3-2,-3  EMS IMMUNITY  1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.  7. Indicates includes set up tolerance, line regulation and load regulation.  8. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.		POWER FACTOR (Typ.)													
INRUSH CURRENT (Typ.) COLD START ≤ 40A/230V LEAKAGE CURRENT < 3.5 mAr / 240VAC  OVER LOAD  Protection type: Hiccup mode, recovers automatically after fault condition is removed  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)  OVER TEMPERATURE(OPTION)  Protection type: Shut down o/p voltage, re-power on to recover  WORKING TEMP.  **OVER TEMPERATURE(OPTION)  Protection type: Shut down o/p voltage, re-power on to recover  WORKING TEMP.  **OVER TEMPERATURE(OPTION)  **OVER TEMPERATURE TE	INPUT	EFFICIENCY (Typ.)	74%				74%				75%				
LEAKAGE CURRENT   43.5mA / 240VAC   105 ~ 150% rated output power   105 ~ 150% rated output		AC CURRENT (Typ.)													
OVER LOAD    105 ~ 150% rated output power		INRUSH CURRENT (Typ.)													
PROTECTION  OVER VOLTAGE  OVER VOLTAGE  OVER TEMPERATURE(OPTION)  Protection type: Shut down o/p voltage, re-power on to recover  OVER TEMPERATURE(OPTION)  95°C±5°C (TSW1)  Protection type: Shut down o/p voltage, re-power on to recover  96°C±5°C (TSW1)  Protection type: Shut down o/p voltage, re-power on to recover  WORKING TEMP.  -10 ~ 460°C (Refer to output load derating curve)  WORKING HUMIDITY  20 ~ 90% RH non-condensing  STORAGE TEMP, HUMIDITY  20 ~ 95% RH  TEMP. COEFFICIENT  -10 ~ 450°C (0-50°C)  VIBRATION  10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes  SAFETY STANDARDS  UL60950-1, TUV EN60950-1 Approved  WITHSTAND VOLTAGE  IP-O/P.3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC  ISOLATION RESISTANCE  IP-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC  EMICONDUCTION & RADIATION  Compliance to EN61000-3-2,-3  EMS IMMUNITY  Compliance to EN61000-3-2,-3  EMS IMMUNITY  Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11; ENV50204, EN55024, Light industry level, criteria A  MTBF  139.9K hrs min. MIL-HDBK-217F (25°C)  DIMENSION  199*99*50mm (L*W*H)  PACKING  0.87Kg; 20pcs/18.4Kg/1.28CUFT  1. All parameters NOT specially mentioned are measured at 20M1-2 from the temperature.  2. Ripple & noise are measured at 20M1-2 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. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.		LEAKAGE CURRENT	_												
PROTECTION  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)  WORKING TEMP.  WORKING HUMIDITY  ENVIRONMENT  ENVIRONMENT  ENVIRONMENT  ENVIRONMENT  ENVIRONMENT  ENVIRONMENT  STORAGE TEMP, HUMIDITY  10 ~ +60°C (Refer to output load derating curve)  WORKING HUMIDITY  20 ~ 90% RH non-condensing  STORAGE TEMP, HUMIDITY  -20 ~ +85°C, 10 ~ 95% RH  TEMP. COEFFICIENT  10 ~ 500Hz, 26 10min./1cycle, 60min. each along X, Y, Z axes  SAFETY STANDARDS  WITHSTAND VOLTAGE  WITHSTAND VOLTAGE  I/P-O/P, I/P-FG, O/P-FG:10M Ohms/500VDC  EMI CONDUCTION & RADIATION  Compliance to EN55022 (CISPR22) Class B  HARMONIC CURRENT  Compliance to EN55022 (CISPR22) Class B  MTBF  139.9k hrs min. MiL-HDBK-217F (25°C)  DIMENSION  199*99*50mm (L*W*H)  PACKING  0.87 Kg; 20pcs/18.4 Kg/1.28 CUFT  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 banding and load regulation.  4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.			105 ~ 150% rated output power												
Protection type: Shut down o/p voltage, re-power on to recover  OVER TEMPERATURE(OPTION)  Protection type: Shut down o/p voltage, recovers automatically after temperature goes down  WORKING TEMP10 ~ +60°C (Refer to output load derating curve)  WORKING HUMIDITY -20 ~ +85°C, 10 ~ 95% RH  TEMP. COEFFICIENT +0.03%/°C (0-50°C)  VIBRATION 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes  SAFETY STANDARDS UL60950-1, TUV EN60950-1 Approved  WITHSTAND VOLTAGE   VP-O/P:3KVAC   VP-FG:0.5KVAC   O/P-FG:0.5KVAC    SAFETY &   ISOLATION RESISTANCE   VP-O/P:3KVAC   VP-FG:1.5KVAC   O/P-FG:0.5KVAC    EMC (Note 4)   HARMONIC CURRENT   Compliance to EN55022 (CISPR22) Class B    HARMONIC CURRENT   Compliance to EN55022 (CISPR22) Class B    MTBF   139.9K hrs min.   MIL-HDBK-217F (25°C)    DIMENSION   199*99*50mm (L*W*H)    PACKING   0.87Kg; 20pcs/18.4Kg/1.28CUFT    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. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.		OVER LOAD	Protection type: Hiccup mode, recovers automatically after fault condition is removed												
Protection type: Shut down o/p voltage, re-power on to recover  95°C±5°C (TSW1)  Protection type: Shut down o/p voltage, recovers automatically after temperature goes down  WORKING TEMP.	PROTECTION	OVER VOLTAGE	CH1:5.75 ~ 6.75V CH2:3.8 ~ 4.4V												
WORKING TEMP.   -10 ~ +60°C (Refer to output load derating curve)	PROTECTION		Protection type : Shut down o/p voltage, re-power on to recover												
WORKING TEMP10 ~ +60°C (Refer to output load derating curve)  WORKING HUMIDITY 20 ~ 90% RH non-condensing  STORAGE TEMP., HUMIDITY -20 ~ +85°C, 10 ~ 95% RH  TEMP. COEFFICIENT ±0.03%/C (0-50°C)  VIBRATION 10 - 500Hz, 26 10min./1cycle, 60min. each along X, Y, Z axes  SAFETY STANDARDS UL60950-1, TUV EN60950-1 Approved  WITHSTAND VOLTAGE I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC  SAFETY &  SOLATION RESISTANCE I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC  EMC (Note 4)  HARMONIC CURRENT Compliance to EN61000-3-2, -3  EMS IMMUNITY Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11; ENV50204, EN55024, Light industry level, criteria A  MTBF 139.9K hrs min. MIL-HDBK-217F (25°C)  DIMENSION 199*99*50mm (L*W*H)  PACKING 0.87Kg; 20pcs/18.4Kg/1.28CUFT  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. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.		OVER TEMPERATURE (ORTION)													
WORKING HUMIDITY  20 ~ 90% RH non-condensing  STORAGE TEMP., HUMIDITY  -20 ~ +85°C, 10 ~ 95% RH  TEMP. COEFFICIENT		OVER TEMPERATURE(OPTION)	Protection type: Snut down o/p voltage, recovers automatically after temperature goes down												
ENVIRONMENT  STORAGE TEMP, HUMIDITY -20 ~ +85°C, 10 ~ 95% RH  TEMP. COEFFICIENT ±0.03% PC (0~50°C)  VIBRATION 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes  SAFETY STANDARDS UL60950-1, TUV EN60950-1 Approved  WITHSTAND VOLTAGE I/P-O/P;3KVAC I/P-FG;1.5KVAC O/P-FG:0.5KVAC  SAFETY & ISOLATION RESISTANCE I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC  EMIC CONDUCTION & RADIATION Compliance to EN55022 (CISPR22) Class B  HARMONIC CURRENT Compliance to EN61000-3-2,-3  EMS IMMUNITY Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, Light industry level, criteria A  MTBF 139.9K hrs min. MIL-HDBK-217F (25°C)  DIMENSION 199*99*50mm (L*W*H)  PACKING 0.87Kg; 20pcs/18.4Kg/1.28CUFT  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. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.		WORKING TEMP.													
TEMP. COEFFICIENT    10.03%/°C (0~50°C)     VIBRATION		WORKING HUMIDITY	20 ~ 90% RH non-condensing												
VIBRATION  10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes  SAFETY STANDARDS  UL60950-1, TUV EN60950-1 Approved  WITHSTAND VOLTAGE  I/P-O/P:3KVAC  I/P-FG:1.5KVAC  O/P-FG:0.5KVAC  ISOLATION RESISTANCE  I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC  EMI CONDUCTION & RADIATION  Compliance to EN55022 (CISPR22) Class B  HARMONIC CURRENT  Compliance to EN61000-3-2,-3  EMS IMMUNITY  Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, Light industry level, criteria A  MTBF  139.9K hrs min. MIL-HDBK-217F (25°C)  DIMENSION  199*99*50mm (L*W*H)  PACKING  0.87Kg; 20pcs/18.4Kg/1.28CUFT  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. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.	ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH												
SAFETY STANDARDS  UL60950-1, TUV EN60950-1 Approved  WITHSTAND VOLTAGE  I/P-O/P:3KVAC  I/P-FG:1.5KVAC  O/P-FG:0.5KVAC  ISOLATION RESISTANCE  I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC  EMI CONDUCTION & RADIATION  Compliance to EN55022 (CISPR22) Class B  HARMONIC CURRENT  Compliance to EN61000-3-2,-3  EMS IMMUNITY  Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, Light industry level, criteria A  MTBF  139.9K hrs min. MIL-HDBK-217F (25°C)  DIMENSION  199*99*50mm (L*W*H)  PACKING  0.87Kg; 20pcs/18.4Kg/1.28CUFT  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. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.		TEMP. COEFFICIENT	±0.03%/°C (0~50°C)												
WITHSTAND VOLTAGE I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC  SAFETY & ISOLATION RESISTANCE I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC  EMI CONDUCTION & RADIATION Compliance to EN55022 (CISPR22) Class B  HARMONIC CURRENT Compliance to EN61000-3-2,-3  EMS IMMUNITY Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, Light industry level, criteria A  MTBF 139.9K hrs min. MIL-HDBK-217F (25°C)  DIMENSION 199*99*50mm (L*W*H)  PACKING 0.87Kg; 20pcs/18.4Kg/1.28CUFT  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. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.		VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes												
SAFETY & EMC (Note 4)  EMI CONDUCTION & RADIATION Compliance to EN55022 (CISPR22) Class B  HARMONIC CURRENT Compliance to EN61000-3-2,-3  EMS IMMUNITY Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, Light industry level, criteria A  MTBF 139.9K hrs min. MIL-HDBK-217F (25°C)  DIMENSION 199*99*50mm (L*W*H)  PACKING 0.87Kg; 20pcs/18.4Kg/1.28CUFT  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. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.		SAFETY STANDARDS	UL60950-1, TUV EN60950-1 Approved												
EMICONDUCTION & RADIATION Compliance to EN55022 (CISPR22) Class B  HARMONIC CURRENT Compliance to EN61000-3-2,-3  EMS IMMUNITY Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, Light industry level, criteria A  MTBF 139.9K hrs min. MIL-HDBK-217F (25°C)  DIMENSION 199*99*50mm (L*W*H)  PACKING 0.87Kg; 20pcs/18.4Kg/1.28CUFT  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. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.								.C							
(Note 4)  HARMONIC CURRENT Compliance to EN61000-3-2,-3  EMS IMMUNITY Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, Light industry level, criteria A  MTBF 139.9K hrs min. MIL-HDBK-217F (25°C)  DIMENSION 199*99*50mm (L*W*H)  PACKING 0.87Kg; 20pcs/18.4Kg/1.28CUFT  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. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.	SAFETY &														
EMS IMMUNITY  Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, Light industry level, criteria A  MTBF  139.9K hrs min. MIL-HDBK-217F (25°C)  DIMENSION  199*99*50mm (L*W*H)  PACKING  0.87Kg; 20pcs/18.4Kg/1.28CUFT  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. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.			Complian	ce to EN55	022 (CISPF	R22) Class	В								
MTBF  139.9K hrs min. MIL-HDBK-217F (25°C)  DIMENSION  199*99*50mm (L*W*H)  PACKING  0.87Kg; 20pcs/18.4Kg/1.28CUFT  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. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.	(Note 4)														
OTHERS    DIMENSION   199*99*50mm (L*W*H)			Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, Light industry level, criteria A												
PACKING  0.87Kg; 20pcs/18.4Kg/1.28CUFT  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. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.		MTBF	139.9K hr	s min. N	IIL-HDBK-2	217F (25°C	)								
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. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.	OTHERS		<del> </del>		,										
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. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.			0. 1												
File Name:QP-100-SPEC 2006-01	NOTE	Ripple & noise are measure     Tolerance : includes set up     The power supply is consided EMC directives.	& noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.  ace: includes set up tolerance, line regulation and load regulation.  wer supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets irectives.  g may be needed under low input voltages. Please check the derating curve for more details.												





### Features:

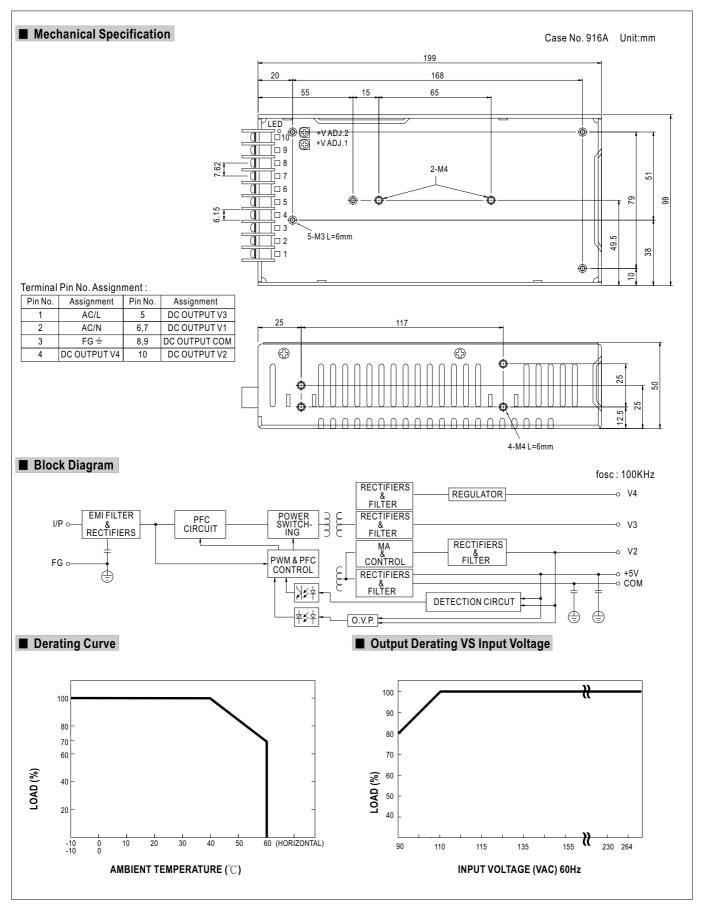
- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protections:Short circuit/Over load/Over voltage
- Free air cooling convection
- CH4:±Polarity is selectable
- Fixed switching frequency at 100KHz
- 3 years warranty

### **SPECIFICATION**



MODEL		QP-100-3D				QP-100D				QP-100F				
	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	8A	8A	1.3A	0.6A	8A	2.4A	1A	0.6A	8A	2A	1A	0.6A	
	CURRENT RANGE	2 ~ 10A	0 ~ 10A	0.3 ~ 2A	0 ~ 1A	2 ~ 10A	0 ~ 3A	0.3 ~ 2A	0 ~ 1A	2 ~ 10A	0 ~ 3A	0.3 ~ 2A	0 ~ 1A	
	RATED POWER (max.)	104.8W				100W				103W				
	RIPPLE & NOISE (max.) Note.2				150mVp-p					120mVp-p 180mVp-p 200mVp-p 150mVp-p				
OUTPUT	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%	±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%	
	SETUP, RISE TIME	800ms, 50ms/230VAC 800ms, 50ms/115VAC at full load												
	HOLD TIME (Typ.)	24ms/230VAC 24ms/115VAC at full load												
	VOLTAGE RANGE Note.5													
	FREQUENCY RANGE	47 ~ 63Hz												
	POWER FACTOR (Typ.)	PF>0.95/230VAC PF>0.98/115VAC at full load												
INPUT	EFFICIENCY (Typ.)	75%				78%				78%				
	AC CURRENT (Typ.)	1.5A/115VAC 0.75A/230VAC												
	INRUSH CURRENT (Typ.)	COLD START \( \frac{40A}{230V} \)												
	LEAKAGE CURRENT	<3.5mA / 240VAC												
		105 ~ 150% rated output power												
	OVER LOAD	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												
PROTECTION		Protection type : Shut down o/p voltage, re-power on to recover												
		95°C ±5°C (TSW1)												
	OVER TEMPERATURE(OPTION)	Protection type : Shut down o/p voltage, recovers automatically after temperature goes down												
	WORKING TEMP.	-10 ~ +60°C (Refer to output load derating curve)												
	WORKING HUMIDITY	20 ~ 90%	RH non-co	ndensing										
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH												
	TEMP. COEFFICIENT	±0.03%/°C (0~50°C)												
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes												
	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 Approved												
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC												
SAFETY &	ISOLATION RESISTANCE	I/P-O/P:3KVAC   I/P-FG:1.5KVAC   O/P-FG:0.5KVAC   I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC												
EMC	EMI CONDUCTION & RADIATION	Complian	ce to EN55	022 (CISPI	R22) Class	В								
(Note 4)	HARMONIC CURRENT	Complian	ce to EN61	000-3-2,-3										
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, Light industry level, criteria A												
	MTBF	139.9K hr	s min. N	IIL-HDBK-2	217F (25°C	)								
OTHERS	DIMENSION	199*99*5	0mm (L*W*	H)										
	PACKING	0,		(g/1.28CUF										
NOTE	All parameters NOT specia     Ripple & noise are measure     Tolerance : includes set up     The power supply is consid EMC directives.     Derating may be needed un	ed at 20Mb tolerance, lered a cor	Iz of band line regula nponent wl	width by us tion and lo hich will be	sing a 12" t ad regulati installed in	wisted pair on. nto a final e	r-wire termi equipment.	nated with The final e	a 0.1uf & 4	17uf paralle	-confirmed	that it still		
											rile Name: C	QP-100-SPEC	; 2006-08	









# Features :

- Universal AC input / Full range
- Built-in active PFC function, PF>0.95
- Protections:Short circuit/Over load/Over voltage
- Free air cooling convection
- Fixed switching frequency at 100KHz
- 3 years warranty

## SPECIFICATION



MODEL		QP-100B				QP-100C							
	OUTPUT NUMBER	CH1	CH2	СНЗ	CH4	CH1	CH2	CH3	CH4				
	DC VOLTAGE	5V	12V	-12V	-5V	5V	15V	-15V	-5V				
	RATED CURRENT	10A	3A	1A	0.6A	10A	2.2A	1A	0.6A				
	CURRENT RANGE	2 ~ 10A	0.3 ~ 4A	0.15 ~ 1A	0 ~ 1A	2 ~ 10A	0.3 ~ 3A	0.15 ~ 1A	0 ~ 1A				
	RATED POWER (max.)	101W		100.00	12	101W							
	RIPPLE & NOISE (max.) Note.2	2 100mVp-p 150mVp-p 150mVp-p 100mVp-p				100mVp-p	150mVp-p	150mVp-p	100mVp-p				
OUTPUT	VOLTAGE ADJ. RANGE	CH1:4.75 ~ 5.5\	1			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%	±2.0%	±6.0%	±2.0%				
	SETUP, RISE TIME	1000ms, 50ms	1000ms, 50ms at full load										
	HOLD TIME (Typ.)	24ms at full load											
	, , ,	90 ~ 264VAC 127 ~ 370VDC											
	FREQUENCY RANGE	47 ~ 63Hz											
	POWER FACTOR (Typ.)	PF>0.95/230VAC PF>0.98/115VAC at full load											
INPUT	EFFICIENCY (Typ.)	76% 77%											
	AC CURRENT (Typ.)	1.5A/115VAC 0.75A/230VAC											
	INRUSH CURRENT (Typ.)	COLD START 40A											
	LEAKAGE CURRENT	<3.5mA / 240VAC											
		105 ~ 135% rated output power											
	OVER LOAD	Protection type: Hiccup mode, recovers automatically after fault condition is removed											
		CH1:5.75 ~ 6.75V											
PROTECTION	OVER VOLTAGE	Protection type: Shut down o/p voltage, re-power on to recover											
		95°C ±5°C (TSW1)											
	OVER TEMPERATURE(OPTION)	Protection type: Shut down o/p voltage, recovers automatically after temperature goes down											
	WORKING TEMP.	-10 ~ +60°C (Refer to output load derating curve)											
	WORKING HUMIDITY	20 ~ 90% RH non-condensing											
ENVIRONMENT	STORAGE TEMP., HUMIDITY	-20 ~ +85°C, 10 ~ 95% RH											
	TEMP. COEFFICIENT	±0.03%/°C (0~50°C)											
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes											
	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 Approved											
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC											
SAFETY &	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC											
EMC	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22) Class B											
(Note 4)	HARMONIC CURRENT	Compliance to	EN61000-3-2,-3	3									
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, Light industry level, criteria A											
	MTBF	139.9K hrs min. MIL-HDBK-217F (25°C)											
OTHERS	DIMENSION	199*99*50mm (L*W*H)											
-	PACKING		2Kg/1.28CUFT										
NOTE	Ripple & noise are measure     Tolerance : includes set up     The power supply is consided EMC directives.	specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.  measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.  set up tolerance, line regulation and load regulation.  considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets eded under low input voltages. Please check the derating curve for more details.											
		File Name:QP-100											



