

### Features:

- Universal AC input / Full range
- Auto switch when power off (UPS function)
- Built-in constant current limit circuit
- Alarm signal for AC OK and Battery low (TTL open collector output or relay contact output)
- Protection: SCP, OLP, OVP
  - Brown-out (Low AC Input Voltage)
  - Battery low protection
  - Battery polarity protection (by Resettable Fuses)
- Withstand 2G vibration test
- 3 years warranty

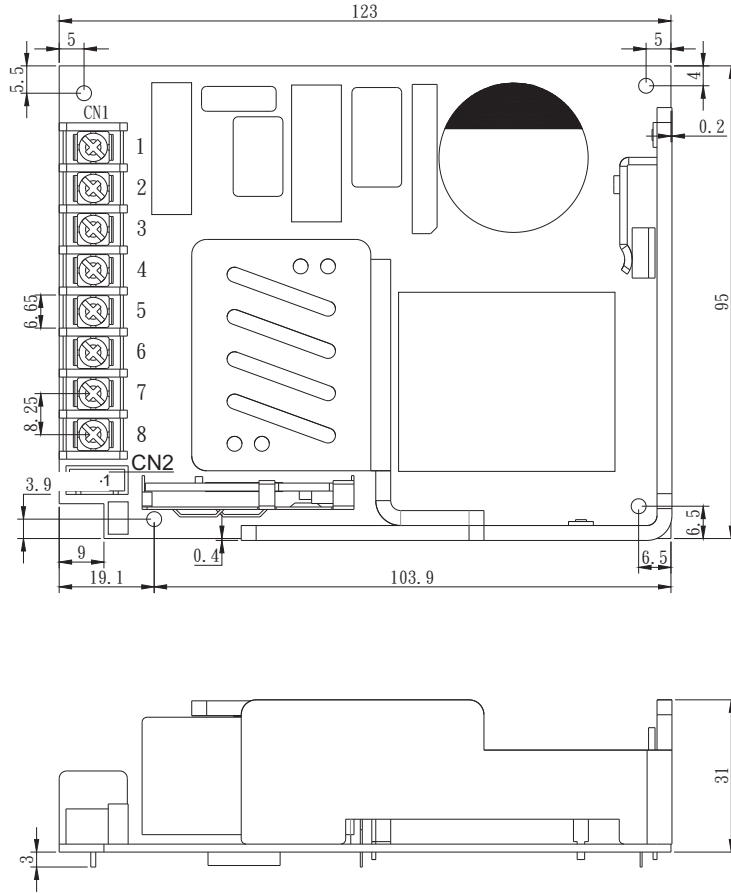


MODEL		QP-100-G		QP-100-GB			QP-100-L		QP-100-LB			
Output	Output Number	CH1	CH2	CH1	CH2	CH3	CH1	CH2	CH1	CH2	CH3	
	DC Voltage Range	13.8V	13.8V	13.8V	13.8V	5V	27.6V	27.6V	27.6V	27.6V	5V	
	Rated Current	4.8A	2.5A	3.7A	2.5A	3A	2.15A	1.5A	1.6A	1.5A	3A	
	Max. Output Current	Note.8	7.3A	2.875A	6.2A	2.875A	3A	3.65A	1.725A	3.1A	1.725A	3A
	Rated Power	100.74W			100.56W			100.74W		100.56W		
	Ripple & Noise (Max.)	Note.2	100mVp-p	150mVp-p	100mVp-p	150mVp-p	100mVp-p	100mVp-p	150mVp-p	100mVp-p	150mVp-p	100mVp-p
	Voltage Adj. Range	CH1: ±10%						CH1: ±10%				
	Voltage Tolerance	Note.3	±2%	—	±2%	—	±3%	±2%	—	±2%	—	±3%
	Line Regulation	Note.4	±0.5%	—	±0.5%	—	±0.5%	±0.5%	—	±0.5%	—	±0.5%
	Load Regulation	Note.5	±0.5%	—	±0.5%	—	±1.5%	±0.5%	—	±0.5%	—	±1.5%
Setup, Rise Time	800ms, 50ms / 230VAC, 800ms, 50ms / 115VAC at full load											
Hold up Time (Typ.)	50ms / 230VAC, 8ms / 115VAC at full load											
Input	Voltage Range	90 ~ 264VAC, 127 ~ 373VDC (Withstand 300VAC surge for 5sec. Without damage)										
	Frequency Range	47 ~ 63Hz										
	Efficiency (Typ.) at 230VAC	86%			85%			87%		85%		
	AC Current (Typ.)	2A / 115VAC, 1.2A / 230VAC										
	Inrush Current (Typ.)	Cold Start 35A / 115VAC, 70A / 230VAC										
Leakage Current	For earth < 1mA / 264VAC											
Protection	Over Load	Above 110% rated output power CH1 / CH3 (GB / LB only) Above 100% rated output current for CH2 Protection type: Hiccup mode, recovers automatically after fault condition is remove										
	Over Voltage	CH1: 115 ~ 150% rated output voltage Protection type: latch-off mode										
	Battery cut off	10V ±5%						20V ±5%				
Function	AC OK	TTL open collector output				Relay contact output			TTL open collector output		Relay contact output	
	Battery Low	Battery low voltage < 12V ±3%						Battery low voltage < 22V ±3%				
Environment	Working Temp.	-20 ~ +70°C (Refer to output load de-rating curve)										
	Working Humidity	20 ~ 90% RH non-condensing										
	Storage Temp. & Humidity	-40 ~ +85°C, 10 ~ 90% RH										
	Temp. Coefficient	±0.03% / °C (0 ~ 50°C) on CH1										
	Vibration	10 ~ 500Hz, 2G 10min. / 1cycle, period for 60min. each along X, Y, Z axes										
Safety & EMC	Safety Standards	Certified UL 60950-1; EN 60950-1										
	Withstand Voltage	I/P-O/P: 3KVAC, I/P-FG: 1.5KVAC, O/P-FG: 0.5KVAC										
	Isolation Resistance	I/P-O/P: 100M Ohms / 500VDC										
	EMI Conduction & Radiation	Certified EN 55022; EN 61000-6-3										
	Harmonic Current	Certified EN 61000-3-2; EN 61000-3-3										
Others	MTBF	134K HRS Certified MIL-HDBK-217F						132.2K HRS Certified MIL-HDBK-217F				
	Dimension (WxHxD)	95.4x31.0x123.2 mm / 3.756x1.220x4.850 inch										
	Packing	0.32kg; 21pcs / 7.72kg / 0.64CUFT										

- 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. Line regulation is measured from low line to high line at rated load.
  5. Load regulation is measured from 10% to 100% rated load.
  6. 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.
  7. Length of set up time is measured at first cold start. Turning ON/OFF the power supply continuously may increase the set up time.
  8. The total power output must not exceed the rated power.
  9. CH2: Battery discharge current must not exceed 50% of the rated power.
  10. Do not connect the GND port with B- port in your application to prevent product damage.

### Mechanical Specification:

Unit:mm



#### Terminal Pin No. Assignment (CN1)

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	5	DC output V+
2	AC/N	6	BAT+
3	FG $\perp$	7	BAT-
4	DC Output com	8	DC/DC Output +5V (GB/LB only)

#### QP-100-G/L

Alarm output Connector (CN2): JST B3B-XH or equivalent

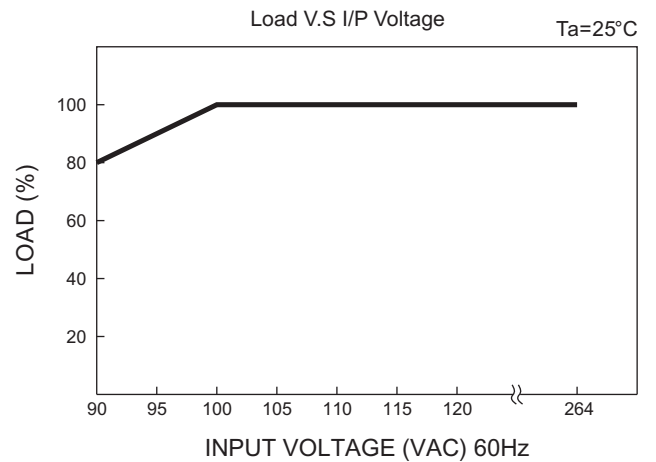
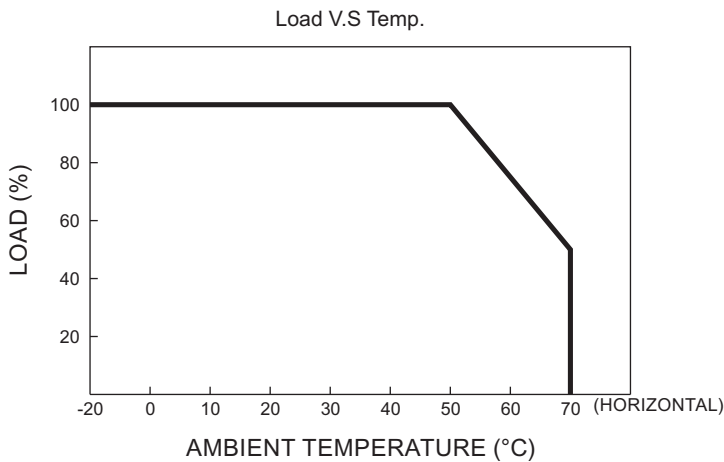
Pin No.	Assignment	Mating Housing	Terminal
1	AC OK	JST XHP-3 or equivalent	JST SXH-001 T-P0.6 or equivalent
2	BAT LOW		
3	G (13.8V/20mA) L (27.6V/20mA)		

#### QP-100-GB/LB

Alarm output Connector (CN2): JST B4B-XH or equivalent

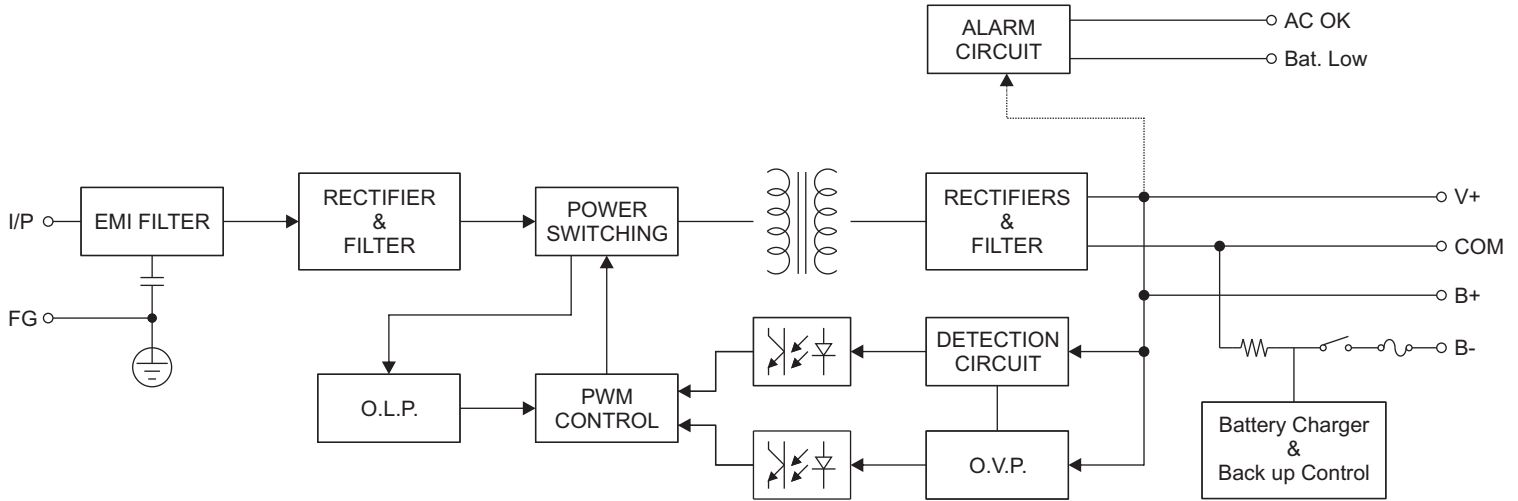
Pin No.	Assignment	Mating Housing	Terminal
1 2	AC OK	JST XHP-4 or equivalent	JST SXH-001 T-P0.6 or equivalent
3 4	Bat. Low		

### De-rating Curve:



### For QP-100-G/L:

#### Block Diagram

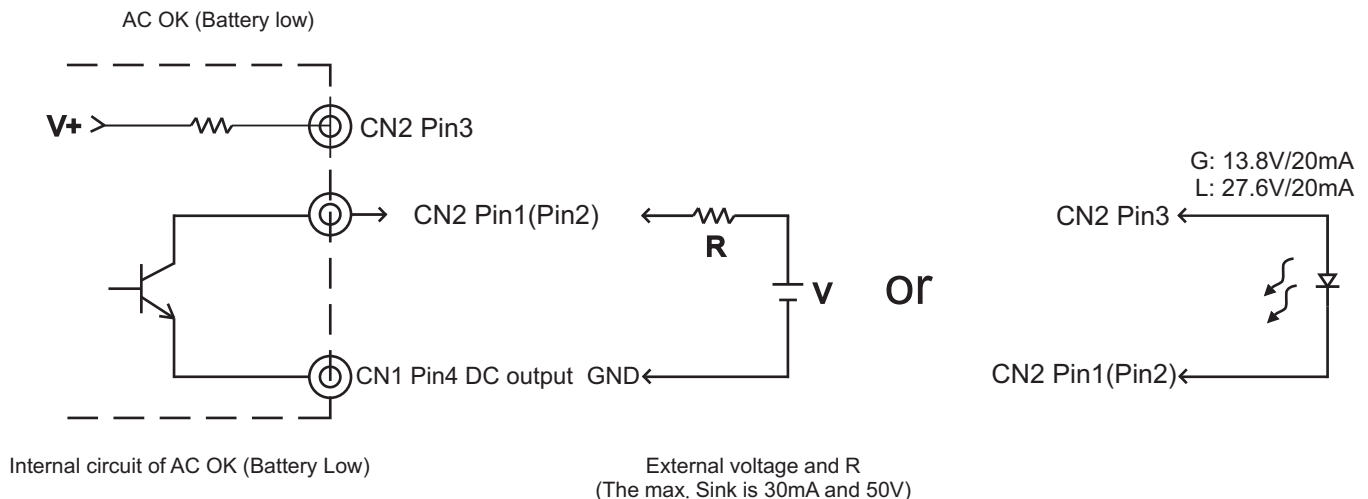


#### Alarm Signal for AC OK and Battery Low

- (1) Alarm Signal is sent out through "AC OK" & "Battery Low" pins.
- (2) An external voltage source is required for this function. The maximum applied voltage is 50V and the maximum sink current is 30mA.
- (3) Table 3.1 explain the alarm function built-in the power supply.

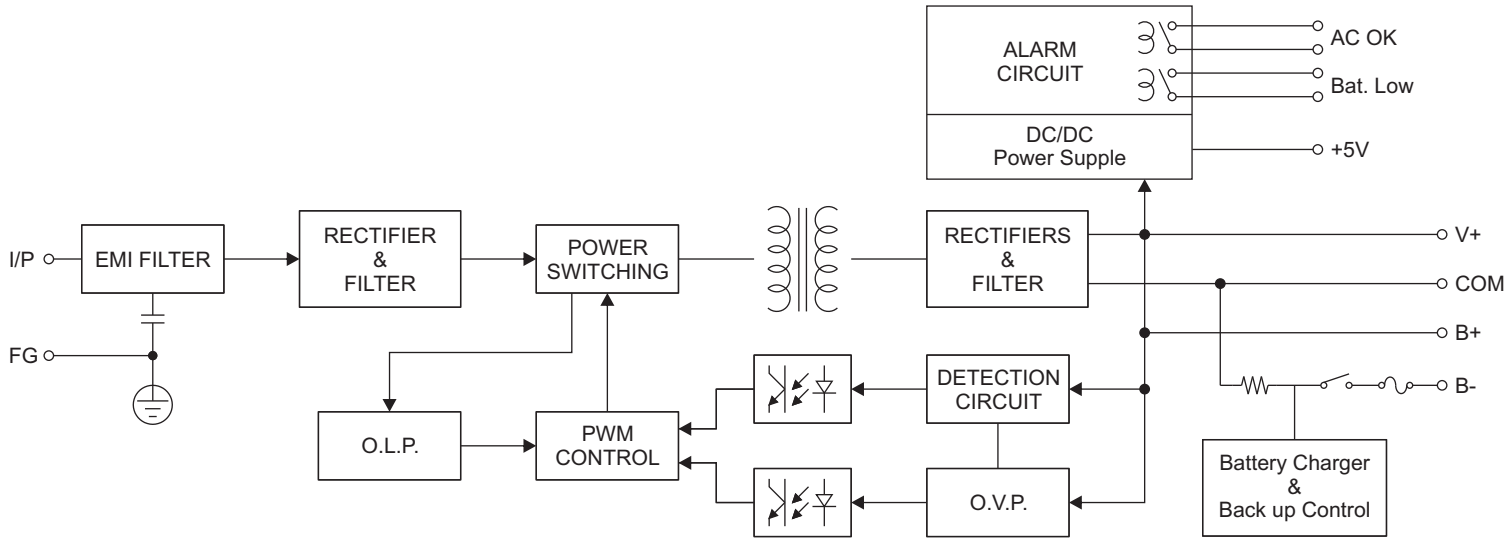
Function	Description	Output of alarm
AC OK	The signal is "Low" when the power supply turns on	Low (0.3V max. at 30mA)
	The signal turns to be "High" when the power supply turns OFF	High or open (External applied voltage 50V max.)
Battery Low	The signal is "Low" when the voltage of battery is under G:12V, L:22V	Low (0.3V max. at 30mA)
	The signal is "High" when the voltage of battery is above G:12V, L: 22V	High or open (External applied voltage 50V max.)

Table 3.1 Explanation of Alarm Signal



### For QP-100-GB/LB:

#### Block Diagram



#### Alarm Signal for AC OK and Battery Low

- (1) Alarm Signal is sent out through "AC OK" & "Battery Low" pins. (relay contact type)
- (2) An external voltage source is required for this function. The maximum applied voltage is 30V and the maximum sink current is 1A.
- (3) Table 4.1 explain the alarm function built-in the power supply.

Function	Description	Output of alarm
AC OK	The signal is "Low" when the power supply turns on	Low or short
	The signal turns to be "High" when the power supply turns OFF	High or open (External applied voltage 30V max.)
Battery Low	The signal is "Low" when the voltage of battery is under GB:12V, LB:22V	Low or short
	The signal is "High" when the voltage of battery is above GB:12V, LB:22V	High or open (External applied voltage 30V max.)

Table 4.1 Explanation of Alarm Signal

#### AC OK (Battery low)

