COTEK 75W 1~3 Output with battery Charger QP-75 series

Features :

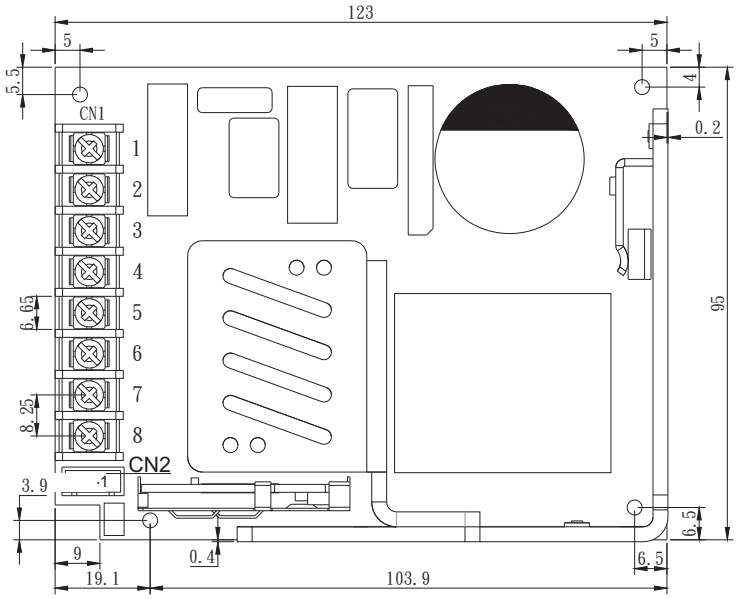
- Universal AC input / Full range
- Auto switch when power off (UPS function)
- Built-in constant current limiting circuit
- Alarm signal for AC OK and Battery low
  (TTL open collector output or Relay contact output)
- Protections: Short circuit / Over load / Over voltage
  Brown-out (Low AC Input Voltage)
  Battery low protection
  Battery polarity protection
  (by Resettable Fuses)
- Cooling by free air convection
- High efficiency, long life and high reliability
- Withstand 2G vibration test
- All using 105°c long life electrolytic capacitors
- 3 years warranty

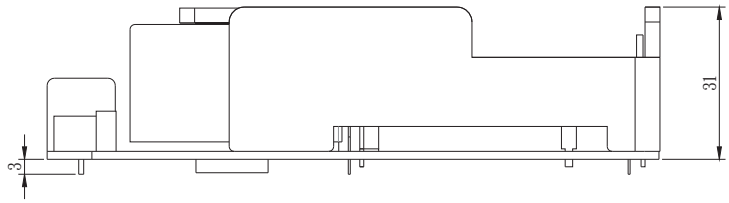
c UL us E204803

MODEL		QP-75-G		QP-75-GB			QP-75-L		QP-75-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	3.7A	1.8A	2.6A	1.8A	3A	1.75A	1A	1.2A	1A	3A
	Max. Output Current Note.8	5.5A	2.07A	4.4A	2.07A	3A	2.75A	1.15A	2.2A	1.15A	3A
	Rated Power	75.9W		75.72W			75.9W		75.72W		
	Ripple & Noise (max.) Note.2	100mV	150mV	100mV	150mV	100mV	100mV	150mV	100mV	150mV	100mV
	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, 30ms/230VAC 800ms, 30ms/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	47Hz ~ 63Hz									
	Efficiency (Typ.) at 230Vac	86%		85%			88%		87%		
	AC Current (Typ.)	1.5A / 115VAC 1.0A / 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		
	BAT Low	Battery low voltage <12V±3%					Battery low voltage <22V±3%				
Environment	Working Temp.	-20°C ~ +70°C (Refer to output load de-rating curve)									
	Working Humidity	20 ~ 90% RH non-condensing									
	Storage Temp., Humidity	-40 ~ +85°C, 10 ~90%									
	Temp. Coefficient	±0.03%/°C (0 ~ 50°C) on CH1									
	Vibration	10 ~ 500Hz, 2G 10min./1 cycle, period for 60 min. each along X,Y,Z axes									
Safety & EMC	Safety Standards	Meet 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: 100M Ω / 500VDC									
	EMI Conduction & Radiation	EN55022 : 2006+A1:2007 Class B									
	Harmonic Current	EN61000-3-2 :2006 Class A, EN61000-3-3 : 2008									
	EMS Immunity	EN61000-4-2,3,4,5,6,8,11; ENV50204; EN55024									
Others	MTBF										
	Dimension (L*W*H)(mm)	123x95x31mm									
	Packing	21PCS									
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 & 47 uf 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 from10% 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 cold first start. Turning ON/OFF the power supply very quickly may lead to increase of the set up time. 8.The total power output can not exceed the rated power, max. output current is each channel. 9.CH2:Battery discharge current can not exceed 50% of the rated power. 10.Do not connect the GND port with B- port in your application to prevent any damage of the product.										

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 ⏚	7	BAT-
4	DC Output com	8	DC/DC Output +5V (GB/LB only)

QP-75-G/L

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

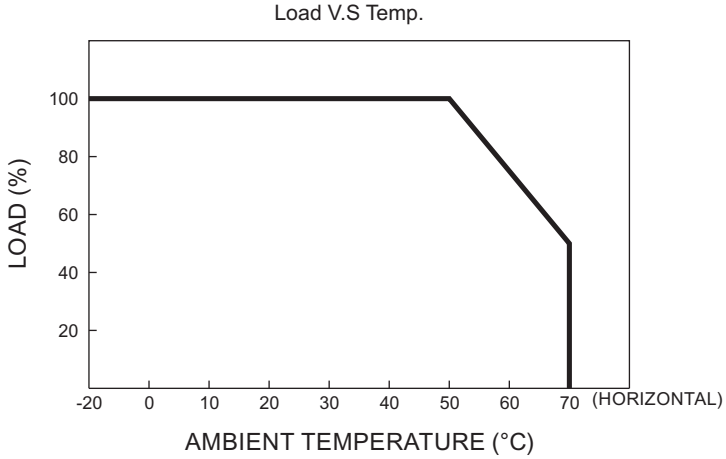
Pin No.	Assignment	Mating Housing	Terminal
1	AC OK	JST XHP-3 or equivalent	JST SXH-001 T-P0.6 or equivalent
2	BAT LOW		
3	G (13.8V/20mA) L (27.6V/20mA)		

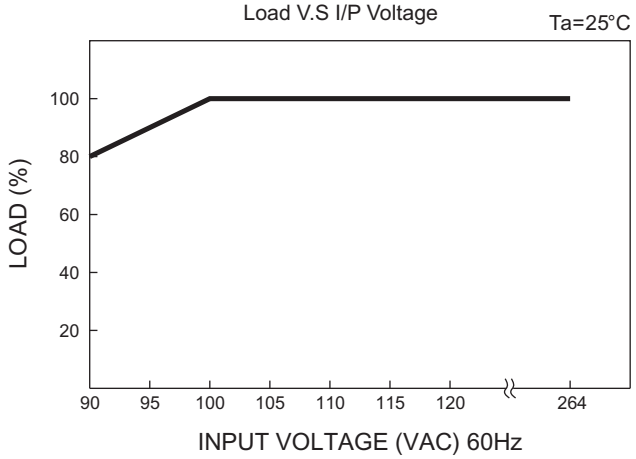
QP-75-GB/LB

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		

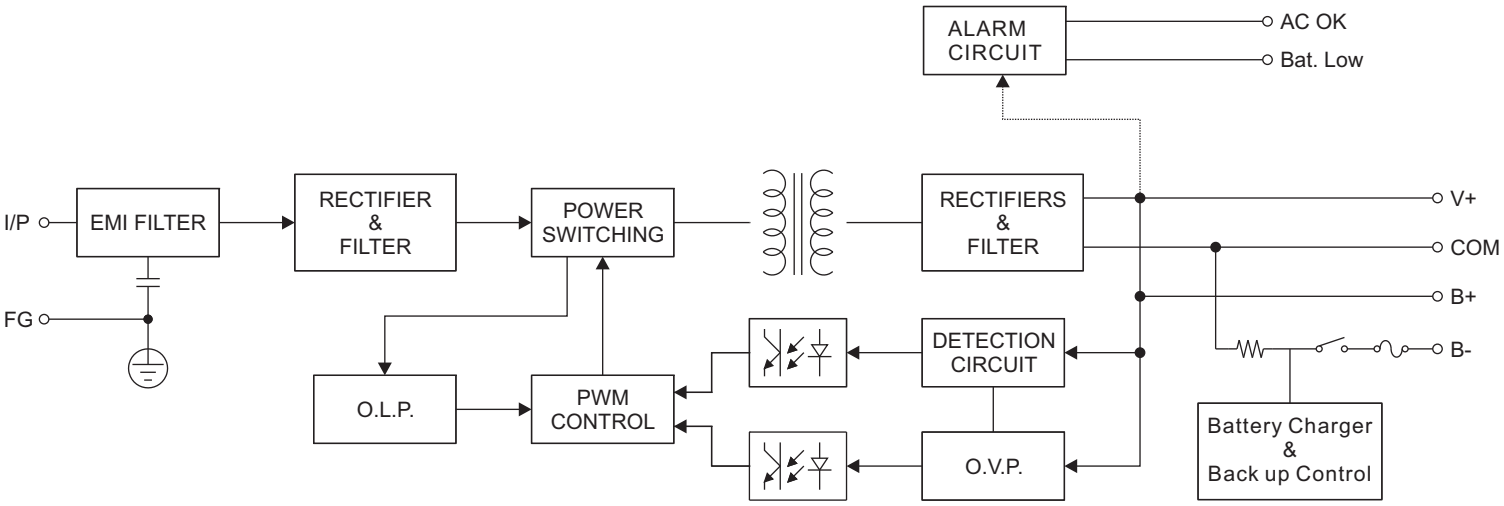
De-rating Curve





■ For QP-75-G/L

■ Block Diagram



■ Alarm Signal for AC OK and Battery Low

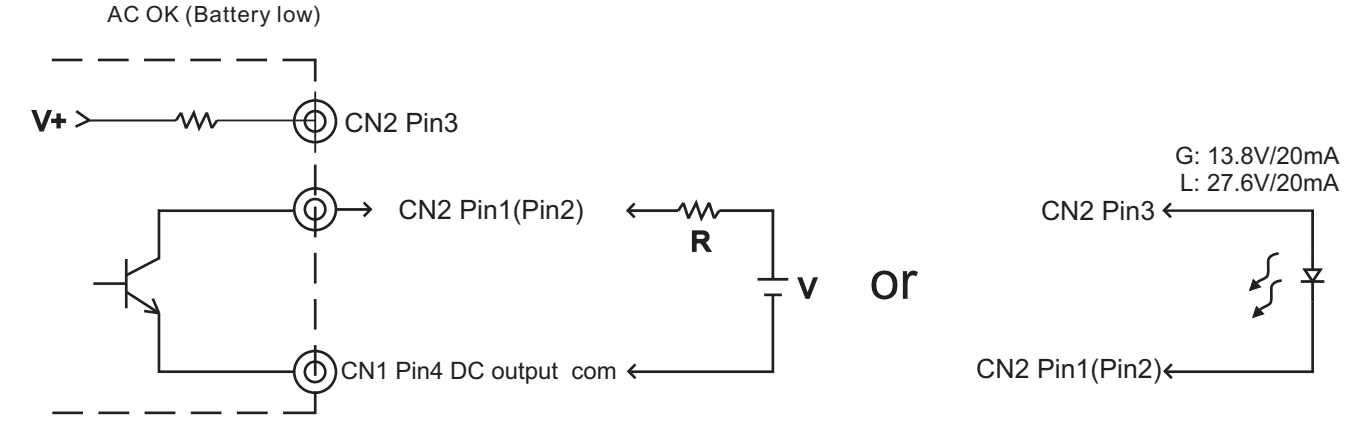
(1) Alarm Signal is sent out through " AC OK " & " Battery Low " pins.

(2) An external voltage source is required for this function. The maximum applied voltage is 50V and the maximum sink current is 30mA.

(3) Table3.1 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 30mA 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 30mA max.)

Table 3.1 Explanation of Alarm Signal

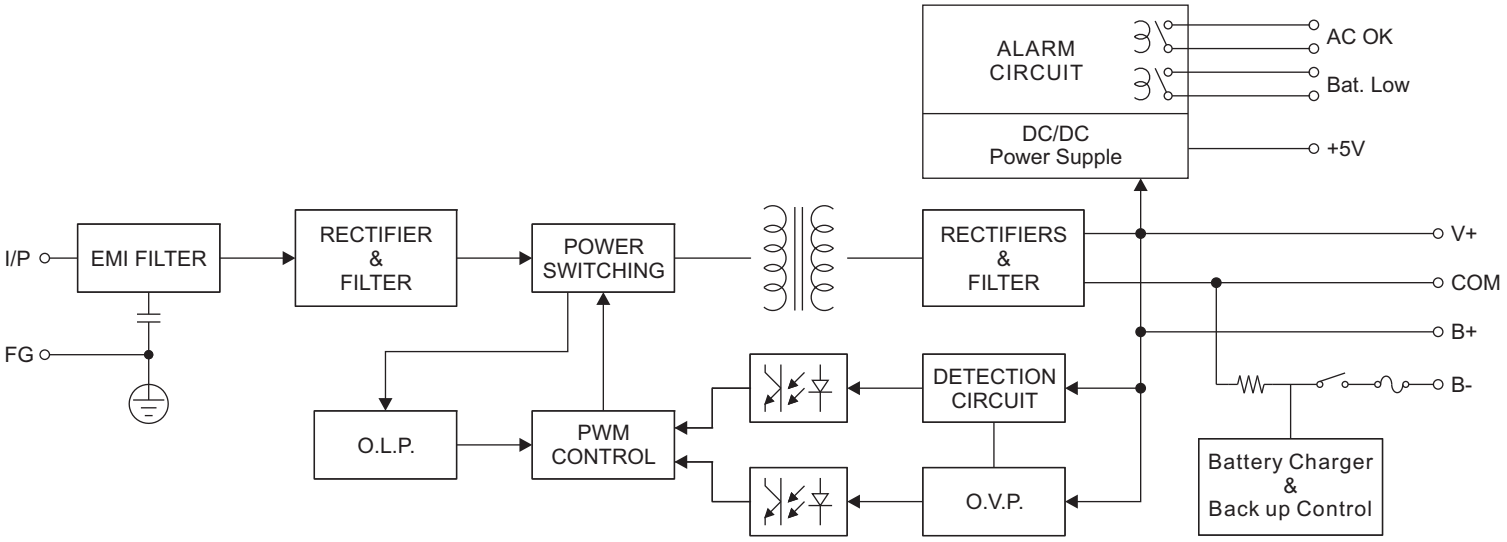


Internal circuit of AC OK (Battery Low)

External voltage and R
(The max. Sink is 30mA and 50V)

■ For QP-75-GB/LB

■ Block Diagram



■ Alarm Signal for AC OK and Battery Low

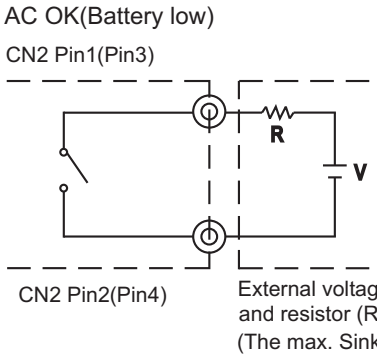
(1) Alarm Signal is sent out through " AC OK " & " Battery Low " pins. (relay contact type)

(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 1A 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 1A max.)

Table 4.1 Explanation of Alarm Signal



Internal circuit of AC OK (Battery Low)