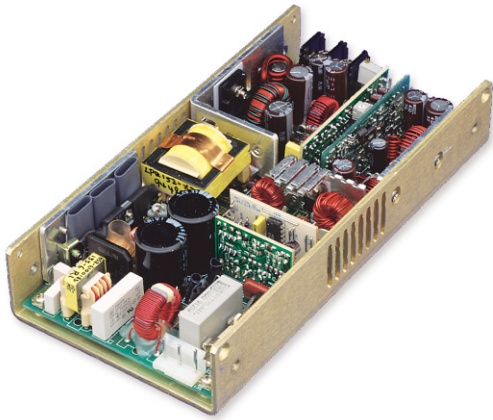


# 150 Watts LPQ150 Series

**Total Power:** 110-150 Watts  
**Input Voltage:** 85-132 / 170-264 VAC  
 220-300 VDC  
**# of Outputs:** Quad



## Special Features

- Auto ranging input
- Remote sense on main output
- Remote inhibit
- Single wire current sharing
- Power fail
- Built-in EMI filter
- Low output ripple
- 135 khz switching frequency
- Overvoltage protection
- Overload protection
- Adjustable floating 4th output (On LPQ152 and LPQ153 models)
- Optional cover (-C suffix). See page 64.

## Environmental

Operating temperature: 0° to 50°C ambient  
 derate each output at 2.5% per degree from  
 50° to 70°C

Electromagnetic susceptibility: designed to meet  
 IEC 801, -2, -3, -4, -5, -6, Level 3

Humidity: Operating; non-condensing  
 5% to 95%

Vibration: Three orthogonal axes, sweep at  
 1 oct/min, 5 min. dwell at four major resonances  
 0.75 G peak 5 Hz to 500 Hz, operational

Storage temperature: -40° to 85°C

Temperature coefficient: ± .04% per °C

MTBF demonstrated: >550,000 hours at full load  
 and 25°C ambient condition

## Electrical Specs

### Input

Input range	85-132 VAC or 170-264 VAC automati- cally selected. 220-300 VDC
Frequency	47-63 Hz
Inrush current	38 A max, cold start @ 25°C
Efficiency	75% typical at full load
EMI filter	Meets FCC Class B conducted CISPR 22 Class B conducted EN55022 Class B conducted VDE 0878 PT3 Class B conducted
Safety ground leakage current	0.5 mA @ 50/60 Hz, 264 VAC input

### Output

Maximum power	110 W convection (75 W with cover) 150 W with 30 CFM forced air (130 W with cover)
Adjustment range	±5% on main; 5-25 V on 4th output on LPQ 152 & LPQ 153
Cross regulation	±2% on output 1; ±3% on outputs 2, 3 & 4
Hold-up time	20 ms @110 W load at nominal line
Overload protection	Short circuit protection on all outputs. Case overload protected @ 110-145% above peak rating
Overvoltage protection	5.7-6.7 VDC on main output

### Logic Control

Power failure	TTL logic signal goes high 50-150 msec after 5 V output. It goes low at least 3 msec before loss of regulation
Remote inhibit	Requires an external TTL high signal to inhibit outputs
Remote sense	Compensates for 0.5 V lead drop min. Will operate without remote sense connected. Reverse connection protected.

## Safety

<b>VDE</b>	0805/EN60950 (IEC950)	11774-3336-1260 (LC# 88585)
<b>UL</b>	UL1950	EI32002
<b>CSA</b>	CSA 22.2-234 Level 3	LR53982
<b>NEMKO</b>	EN 60950/EMKO-TUE (74-sec) 203	P95102999
<b>CB</b>	Certificate and report	2061
<b>CE</b>	Mark (LVD)	

rev 12.10.03

AMERICAS

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ASIA

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Tower 1, Metroplaza  
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Fwai Fong, New Territories  
Hong Kong  
Telephone: 852-2437-9662  
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## Ordering Information

Model Number	Output Voltage	Minimum Load	Maximum Load with Convection Cooling	Maximum Load with 30 CFM Forced Air	Peak Load <sup>1</sup>	Regulation <sup>2</sup>	Ripple P/P (PARD) <sup>3</sup>
LPQ152	5 V	2 A	15 A	22 A	30 A	±2%	50 mV
	12 V	.1 A	6 A	8 A	10 A	±3%	120 mV
	-12 V	.1 A	2 A	2.5 A	3 A	±3%	120 mV
	±5-25 V	0 A	2.5 A	3 A	3 A	±3%	240 mV, max.
LPQ153	5 V	2 A	15 A	22 A	30 A	±2%	50 mV
	15 V	.1 A	4.8 A	6.4 A	8 A	±3%	150 mV
	-15 V	.1 A	1.6 A	2 A	2.4 A	±3%	150 mV
	±5-25 V	0 A	2.5 A	3 A	3 A	±3%	240 mV, max.
LPQ154	5 V	2 A	15 A	22 A	30 A	±2%	50 mV
	12 V	.1 A	6 A	8 A	10 A	±3%	120 mV
	-12 V	.1 A	2 A	2.5 A	3 A	±3%	120 mV
	24 V	.5 A	3.5 A	4.5 A	5 A	+10 / -5%	240 mV

1. Peak current lasting <30 seconds with a maximum 10% duty cycle.
2. At 25°C including initial tolerance, line voltage, load currents and output voltages adjusted to factory settings.
3. Peak-to-peak with 20 MHz bandwidth and 10 μF in parallel with a 0.1 μF capacitor at rated line voltage and load ranges.
4. 4th output adjustable 5-25 V factory set at 5 V.
5. Minimum loads are required.

Note: -C suffix added to the model number indicates cover option.

## Pin Assignments

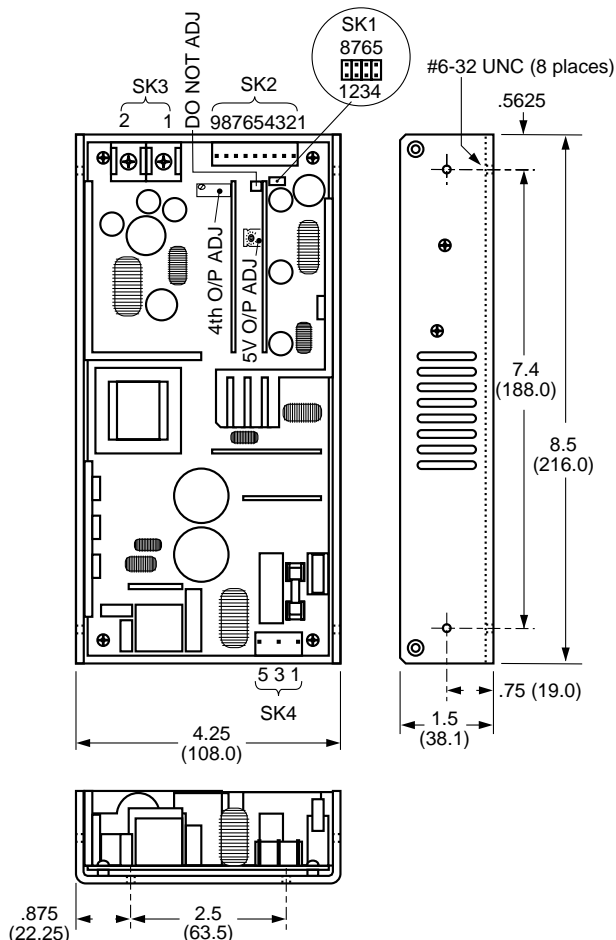
Connector	LPQ152	LPQ153	LPQ154
<b>SK1</b>	PIN 1 INHIBIT -ve	INHIBIT -ve	INHIBIT -ve
	PIN 2 INHIBIT +ve	INHIBIT +ve	INHIBIT +ve
	PIN 3 +12 V	+15 V	+12 V
	PIN 4 No Connection	No Connection	No Connection
	PIN 5 COMMON	COMMON	COMMON
	PIN 6 -SENSE	-SENSE	-SENSE
	PIN 7 +SENSE	+SENSE	+SENSE
	PIN 8 I SHARE	I SHARE	I SHARE
<b>SK2</b>	PIN 1,2 +12 V	+15 V	+12 V
	PIN 3,4,5 COMMON	COMMON	COMMON
	PIN 6 -12 V	-15 V	-12 V
	PIN 7 POK	POK	POK
	PIN 8 +5 V to +25 V (Float)	+5 V to +25 V (Float)	+24 V
	PIN 9 COMMON (Float)	COMMON (Float)	COMMON
<b>SK3</b>	TB-1 COMMON	COMMON	COMMON
	TB-2 +5 V	+5 V	+5 V
<b>SK4</b>	PIN 1 GROUND	GROUND	GROUND
	PIN 3 LINE	LINE	LINE
	PIN 5 NEUTRAL	NEUTRAL	NEUTRAL

**Mating Connectors**

- (SK4) AC Input: Molex 09-50-8051 (USA)  
Molex 09-91-0500 (UK)  
PINS: 08-58-0111
- (SK2) Aux DC Output/Power fail: Molex 09-50-8091 (USA)  
Molex 09-91-0900 (UK)  
PINS: 08-58-0111
- (SK1) Remote sense/Remote inhibit: Molex 51110-0851 (USA)  
PINS: 503-94-8100

**Notes**

1. Specifications subject to change without notice.
2. All dimensions in inches (mm), tolerance is ±0.02".
3. Specifications are for convection rating at factory settings unless otherwise stated.
4. Remote inhibit requires an external 5V @ 10mA to activate.
5. Mounting (6-32) maximum insertion depth is 0.12".
6. Warranty: 2 year
7. Weight: 1.75 lb. / 0.80 kg



Astec Connector Kit #70-841-010, includes al of the above.