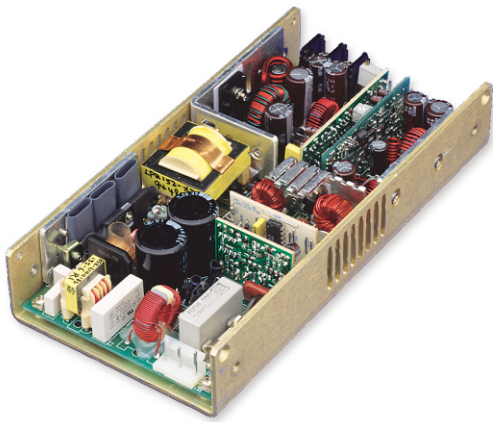


# 150 Watts LPQ150 Series

**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 automatically 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<br>CISPR 22 Class B conducted<br>EN55022 Class B conducted<br>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)<br>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

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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

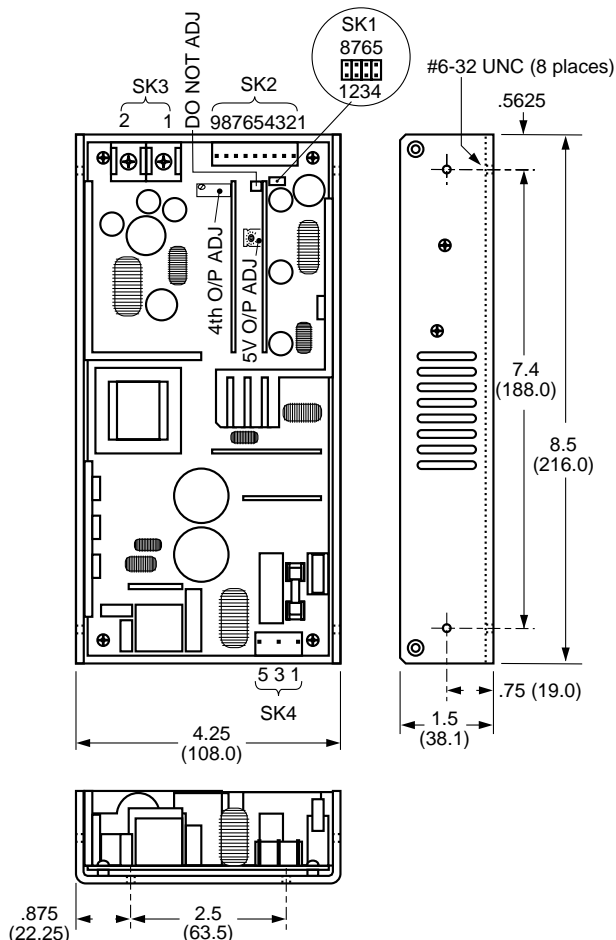
| Connector | LPQ152    | LPQ153                | LPQ154                |               |
|-----------|-----------|-----------------------|-----------------------|---------------|
| SK1       | PIN 1     | INHIBIT -ve           | INHIBIT -ve           |               |
|           | PIN 2     | INHIBIT +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       |
| SK2       | 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         |
| SK3       | PIN 9     | COMMON (Float)        | COMMON (Float)        | COMMON        |
|           | TB-1      | COMMON                | COMMON                | COMMON        |
| SK4       | TB-2      | +5 V                  | +5 V                  | +5 V          |
|           | 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: 1 year
7. Weight: 1.75 lb. / 0.80 kg



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