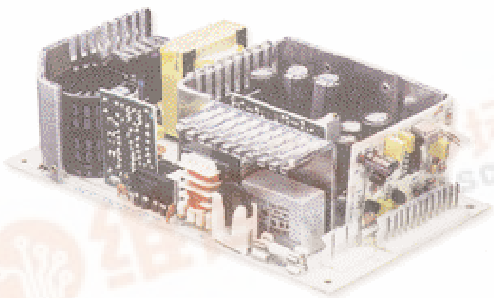
110 Watts
LPQ110 Series

Total Power: **80-110 Watts**
Input Voltage: **85-264 VAC**
120-300 VDC
# of Outputs: **Quad**



Special Features

- Universal input
- High efficiency
- Remote sense on main output
- Built-in EMI filter
- Low output ripple
- Adjustable 5 V output
- Overvoltage protection
- Overload protection
- Adjustable floating 4th output (On LPQ112 and LPQ113)
- Power fail
- Optional L bracket (-B suffix)
- Cover kit available LPX110-C

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 conditions

Electrical Specs

Input

Input range	85-264 VAC 120-300 VDC
Frequency	47-440 Hz
Inrush current	<18 A peak @ 115 VAC; <36 A peak @ 230 VAC, cold start @ 25°C
Input current	2.5 A max. (RMS) @ 115 VAC
Efficiency	70% typical at full load
EMI filter	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	80 W for convection; 110 W with 30 CFM forced air
Adjustment range	±5% min. on main; 5-25 V on 4th output on LPQ112 and LPQ113
Cross regulation	±2% on output 1; ±3% on outputs 2, 3 & 4
Hold-up time	20 ms @ 80 W load, 115 VAC 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. Latching type, recycle AC to reset.

Logic Control

Power Failure	TTL logic signal goes high 50-150 msec after 5 V output. It goes low at least 4 msec before loss of regulation.
Remote sense	Compensates for 0.5 V lead drop min. Will operate without remote sense connected. Reverse connection protected.

Electrical Specs

VDE	0805/EN60950 (IEC950)	11774-3336-1245 (LC #84997)
UL	UL1950	E132002
CSA	CSA 22.2-234 Level 3	LR53982C
NEMKO	EN 60950/EMKO-TUE (74-sec) 203	P94102464
CB	Certificate and report	1423, 1424, 1425
CE	Mark (LVD)	

rev 12.10.03

AMERICAS

5810 Van Allen Way
Carlsbad, CA 92008
Telephone: 760-930-4600
Facsimile: 760-930-0698

EUROPE

Astec House, Waterfront Business Park
Merry Hill, Dudley
West Midlands, DY5 1LX, UK
Telephone: 44 (1384) 842-211
Facsimile: 44 (1384) 843-355

ASIA

Units 2111-2116, Level 21
Tower1, Metroplaza
223, Hing Fong Road
Fwai Fong, New Territories
Hong Kong
Telephone: 852-2437-9662
Facsimile: 852-2402-4426

ASTEC

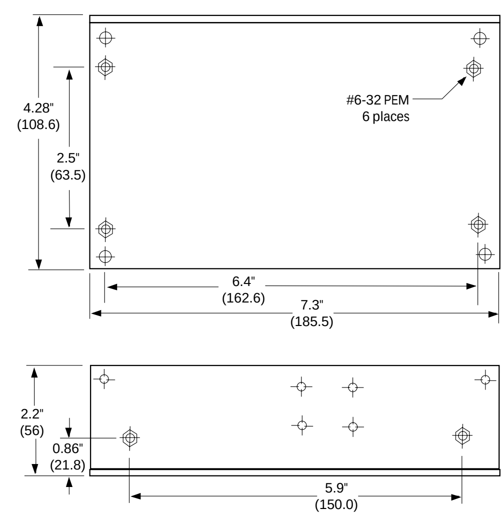
Ordering Information

Model Number	***Output Voltage***	***Minimum Load***	***Maximum Load with Convection Cooling***	***Maximum Load with 30 CFM Forced Air***	***Peak Load1***	***Regulation2***	***Ripple P/P (PARD)3***
LPQ112	5 V	2 A	9 A	11 A	15 A	±2%	50 mV
	12 V	0 A	4.5 A	5 A	9 A	±3%	120 mV
	-12 V	0 A	0.7 A	1.0 A	1.5 A	±5%	120 mV
	±5-25 V	0 A	2.5 A	3 A	3.5 A	±3%	240 mV, max.
LPQ113	5 V	2 A	9 A	11 A	15 A	±2%	50 mV
	15 V	0 A	4.5 A	5 A	9 A	±3%	150 mV
	-15 V	0 A	0.7 A	1.0 A	1.5 A	±5%	150 mV
	±5-25 V	0 A	2.5 A	3 A	3.5 A	±3%	240 mV, max.
LPQ114	5 V	2A	9 A	11 A	15 A	±2%	50 mV
	12 V	0 A	4.5 A	5 A	9 A	±3%	120 mV
	-12 V	0 A	0.7 A	1.0 A	1.5 A	±5%	120 mV
	24 V	0.5 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 O/P adjustable 5 to 25 V, factory set at 5 V.
5. Minimum loads are required.

Note: -B suffix added to model number indicates L bracket option.

-B Bracket



Pin Assignments

Connector	LPQ112	LPQ113	LPQ114
SK1-1	GND	GND	GND
SK1-3	Neutral	Neutral	Neutral
SK1-5	Line	Line	Line
SK2-1	+5 V	+5 V	+5 V
SK2-2	+5 V	+5 V	+5 V
SK2-3	+5 V	+5 V	+5 V
SK2-4	Common	Common	Common
SK2-5	Common	Common	Common
SK2-6	Common	Common	Common
SK2-7	Common	Common	Common
SK2-8	+12 V	+15 V	+12 V
SK2-9	+12 V	+15 V	+12 V
SK2-10	-12 V	-15 V	-12 V
SK2-11	+5-25 V	+5-25 V	+24 V
SK2-12	-5-25 V	-5-25 V	Common
SK201-1	+sense	+sense	+sense
SK201-2	-sense	-sense	-sense
SK202-1	POK	POK	POK
SK202-2	GND	GND	GND

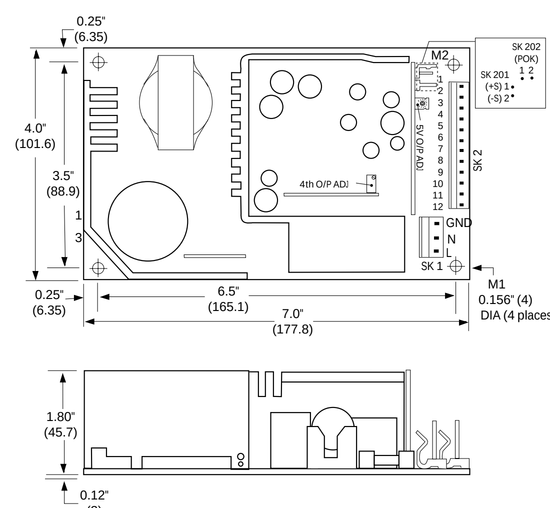
Mating Connectors

AC Input: Molex 09-50-8051 (USA)
09-91-0500 (UK)
PINS: 08-58-0111

DC Outputs: Molex 09-50-8121 (USA)
09-91-1200 (UK)
PINS: 08-58-0111

Remote sense/Power fail:
Molex 22-01-1022 (USA)
22-01-1023 (UK)
PINS: 08-50-0114

Astec Connector Kit #70-841-008, includes all of the above.



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. Mounting holes M1 and M2 should be grounded for EMI purposes.
5. Mounting hole M1 is safety ground connection.
6. L bracket mounting (6-32) maximum insertion depth is .20” (5).
7. Warranty: 1 year
8. Weight: 1.25 lb./0.57 kg