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# LPQ200-M Series 200 Watts

**Total Power:** 100 - 200 Watts **Input Voltage:** 90 - 264 Vac **# of Outputs:** Quad



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## **Special Features**

- Medical and ITE safeties
- Active power factor correction
- 3" x 5" footprint
- Less than 1U high
- EN61000-3-2 compliant
- Remote sense
- Power fail
- Adjustable outputs
- Built-in Class B EMI filter
- Overvoltage protection
- Overload protection
- Thermal overload protection
- LPX200 enclosure kit available

## **Electrical Specifications**

Input			
Input range:	90 - 264 Vac; 120 - 300 Vdc		
Frequency:	47 - 63 Hz		
Inrush current:	50 A max., cold start @ 25 °C, 230 Vac input		
Efficiency:	84% typical at full load		
EMI/RFI:	FCC Class B conducted; CISPR22 Class B conducted; EN55022 Class B conducted; VDE0878PT3 Class B conducted		
Safety ground leakage current:	275 uA @ 50/60 Hz, 264 Vac input		
Output			
Maximum power:	100 W for convection; 200 W with 30CFM forced air		
Adjustment range:	All outputs -20%, +10%, except for the 3.3 V output which will be -15%, +10% (LPQ201-M)		
Hold-up time:	16 ms @ 200 W load, 120 Vac input		
Overload protection:	Short circuit protection on all outputs. V1, V2 & V3 overload protected @ 110 - 160%. V4 is 150 - 250% above rating		
Overvoltage protection:	30 - 50% above nominal output on V1 (and V2 on LPQ202)		
Logical Control			
Power failure:	Active low logic signal goes high 100-500 msec after main output; it goes low at least 6 msec before loss of regulation		
Remote sense:	Compensates for 0.5 V lead drop min. Will operate without remote sense connected. Reverse connection protected.		

### Safety

TUV 60950, 60601-1
UL 60950, 60601-1
CSA 60950, 60601-1
CB Certificate & report
CE Mark (LVD)



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# **Environmental Specifications**

Operating temperature: 0° to 50 °C ambient derate each output as 2.5% per degree from 50° to 70 °C. -20 °C

start up

Storage temperature: -40 °C to +85 °C

Electromagnetic Designed to meet EN61000-4; susceptibility: -2, -3, -4, -5, -6, -8, -11 Level 3

Humidity: Operating; non-condensing 10% to 90% RH, non-operating, non-condensing 10 - 95%

Vibration: IEC68-2-6 to the levels of IEC721-3-2

MTBF calculated: 516,000 hours at full load and 25 °C ambient conditions. 230 Vac input, Bellcore

Ordering Information							
Model Number	Output Voltage	Minimum Load	Maximum Load with Convection Cooling	Maximum Load with 30CFM Forced Air	Peak Load	Regulation <sup>2</sup>	Ripple P/P (PARD)³
	+3.3 V	0 A	13 A	18 A	20 A	± 2%	50 mV
	+5 V	0 A	13 A	18 A	20 A	± 5%	50 mV
LPQ201-M	+12 V	0 A	5 A	9 A	10 A	± 5%	120 mV
	-12 V	0 A	1 A	2 A	2.5 A	± 5%	120 mV
LPQ202-M	+5 V	0 A	13 A	18 A	20 A	± 2%	50 mV
	+12 V	0 A	5 A	9 A	10 A	± 5%	120 mV
	+24 V	0 A	1.5 A	3 A	3.5 A	± 7%	240 mV
	-12 V	0 A	1 A	2 A	2.5 A	± 5%	120 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  $\mu$ F (tantalum capacitor) in parallel with a 0.1  $\mu$ F capacitor at rated line voltage and load ranges.

Mating Connectors

Pin Assignments					
Connector LPQ200-M					
SK1	Pin 1	Neutral			
	Pin 3	Line			
SK2	Pin 1	V1 OUT			
	Pin 2	V2 OUT			
	Pin 3	GND OUT			
	Pin 4	GND OUT			
	Pin 5	GND OUT			
	Pin 6	GND OUT			
	Pin 7	V3 OUT			
	Pin 8	V4 OUT			
SK3	Pin 1	+V1 Remote sense			
	Pin 2	-V1 Remote sense			
	Pin 3	N/C			
	Pin 4	N/C			
	Pin 5	+Power fail			
	Pin 6	Common			
	Pin 7	N/C			
	Pin 8	Common			
	Pin 9	+V2 Remote Sense (LPQ201-M only)			
	Pin 10	-V2 Remote Sense (LPQ201-M only)			

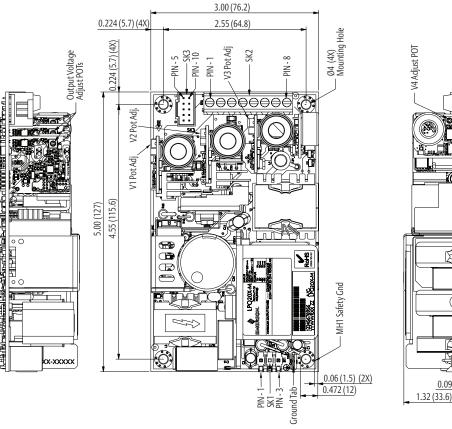
IVI	Mating Connectors						
AC	Input (SK1):	Molex 09-50-8031 (connector) PINS: 08-52-0113					
AC	Ground:	Molex 01-90020001					
DC Output (SK2):		Terminal block Wire size based on Cable Ampacity/AWG					
Control Signals (SK3):		Molex 90142-0010 (USA) PINS: 90119-2110 or Amp: 87977-3 PINS: 87309-8					
En	nerson Network	Power Connector Kit #70-841-027, includes all of the above.					
1.	Specifications subject to change without notice.						
2.	All dimensions	nsions in inches (mm), tolerance is ± 0.02" (± 0.5 mm)					
3.	. Mounting holes MH1 and MH2 should be grounded for EMI purposes.						
4.	Mounting hole MH1 is safety ground connection.						
5.	. Specifications are for convection rating at factory settings at 115 VAC input, 25 °C unless otherwise stated.						
6.	This power supply requires mounting on metal standoffs 0.20" (5 m) in height.						
7.	Warranty: 2 years						
8.	Weight: 1.5 lbs/0.68 kg						

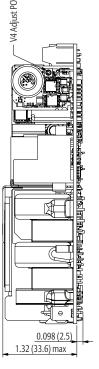
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#### Mechanical Drawing





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