



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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## LPQ200-M Series

200 Watts

### Data Sheet

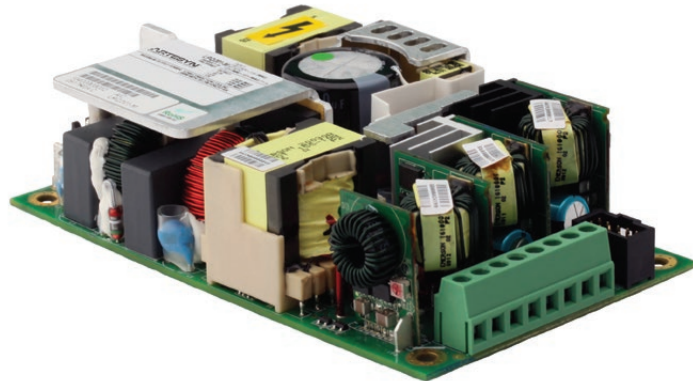
**Total Power:** 100 - 200 Watts  
**Input Voltage:** 90 - 264 Vac  
**# of Outputs:** Quad

### 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
- RoHS compliant

### SAFETY

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



### 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 µA @ 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 LPQ201-M)
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 0.4 V lead drop min. Will operate without remote sense connected. Reverse connection protected.

### Environmental Specifications

Operating temperature	0 °C to 50 °C ambient derate each output as 2.5% per degree from 50 °C to 70 °C. -20 °C start up
Storage temperature	-40 °C to +85 °C
Electromagnetic susceptibility	Designed to meet EN61000-4; -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) <sup>3</sup>
LPQ201-M	+3.3 V	0 A	13 A	18 A	20 A	± 2%	50 mV
	+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
	-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	± 5%	240 mV
	-12 V	0 A	1 A	2 A	2.3 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 µF (tantalum capacitor) in parallel with a 0.1 µF capacitor at rated line voltage and load ranges.
4. This product is a Component Power Supply and is only for inclusion by professional installers within other equipment and must not be operated as a standalone product. EMC compliance to appropriate standards must be verified at the system level. This product is for sale to OEMs and System Integrators, including through Distribution Channels. It is not intended for sale to End Users.

### 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
SK3	PIN 7	V3 OUT
	PIN 8	V4 OUT
	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)

### Mating Connectors

AC Input (SK1)	Molex 09-50-3031 (connector) PINS: 08-52-0072
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
Artesyn Embedded Technologies Connector Kit #70-841-027, includes all of the above.	

1. Specifications subject to change without notice.
2. All dimensions 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

