

## LPQ200-M Series

200 Watts

**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

### 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 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.

## 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 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	± 5%	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	± 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 μF (tantalum capacitor) in parallel with a 0.1 μF capacitor at rated line voltage and load ranges.

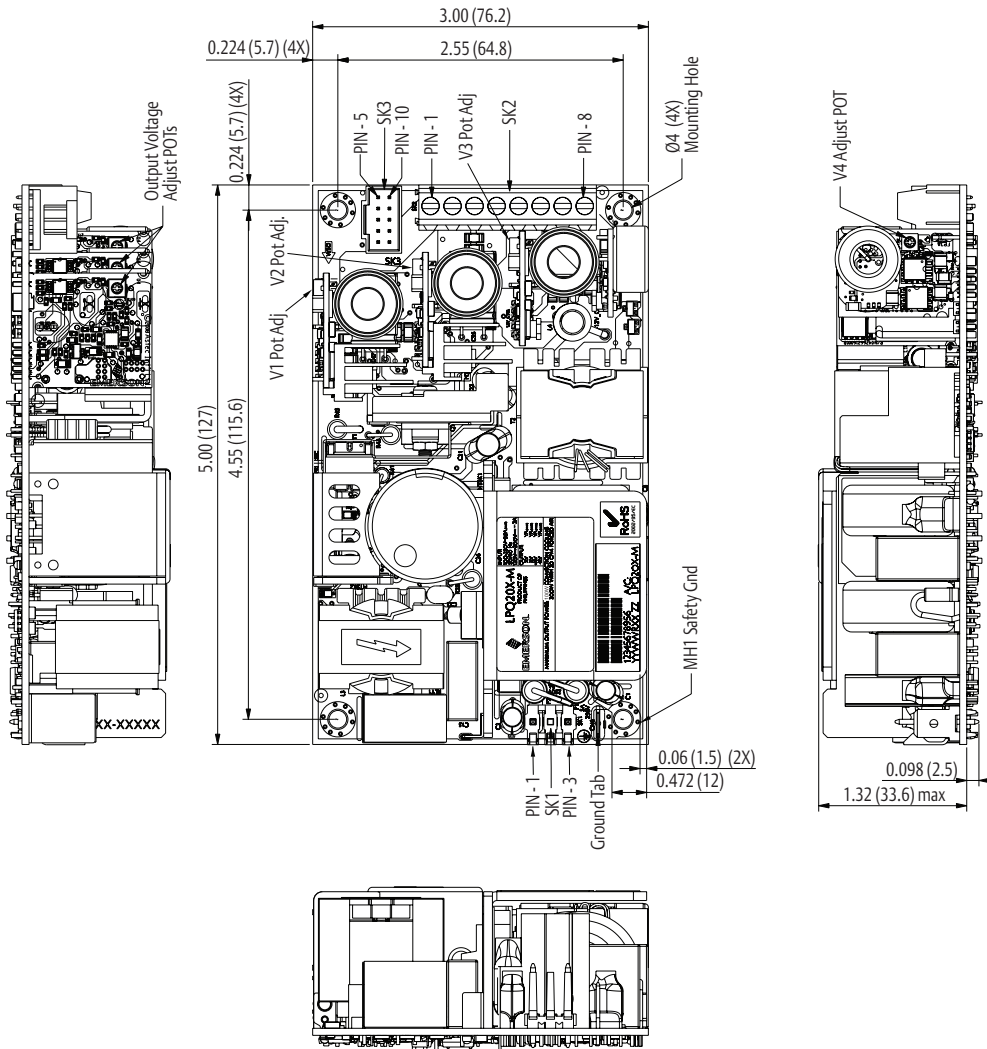
## Pin Assignments

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)

## 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
Emerson Network Power 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	

Mechanical Drawing



**Americas**

5810 Van Allen Way  
Carlsbad, CA 92008  
USA  
Telephone: +1 760 930 4600  
Facsimile: +1 760 930 0698

**Europe (UK)**

Waterfront Business Park  
Merry Hill, Dudley  
West Midlands, DY5 1LX  
United Kingdom  
Telephone: +44 (0) 1384 842 211  
Facsimile: +44 (0) 1384 843 355

**Asia (HK)**

14/F, Lu Plaza  
2 Wing Yip Street  
Kwun Tong, Kowloon  
Hong Kong  
Telephone: +852 2176 3333  
Facsimile: +852 2176 3888

For global contact, visit:

[www.Emerson.com/EmbeddedPower](http://www.Emerson.com/EmbeddedPower)  
[techsupport.embeddedpower@emerson.com](mailto:techsupport.embeddedpower@emerson.com)

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#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.