

# POWER

## LPQ170 Series

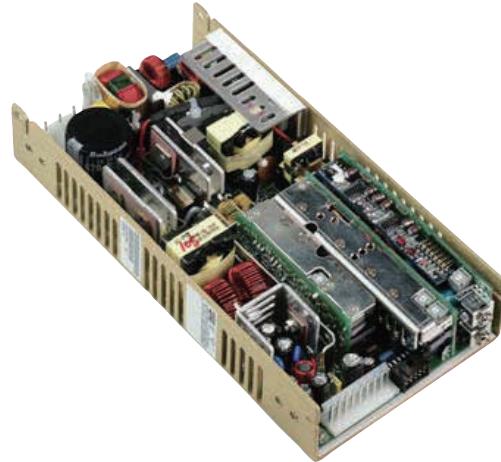
175 Watts

### Data Sheet

**Total Power: 110 - 175 Watts**

**Input Voltage: 85 - 264 Vac**  
**120 - 300 Vdc**

**# of Outputs: Quad**



### SPECIAL FEATURES

- Active power factor correction
- IEC EN61000-3-2 compliance
- Adjustable outputs on 1, 3 & 4
- Remote sense on main output
- Single wire current sharing
- Power fail and remote inhibit
- Built-in EMI filter
- Low output ripple
- Overvoltage protection
- Overload protection
- Thermal overload protection
- DC power good
- 5 V standby output
- Adjustable floating 4th output
- Optional cover (-C suffix)
- RoHS compliant

### SAFETY

▪ UL	UL60950
▪ CB	Certificate and report
▪ CSA	CSA 22.2-234 Level 3
▪ CE	Mark (LVD)
▪ NEMKO	EN 60950/EMKO-TUE

### Electrical Specifications

Input	
Input range	85-264 Vac; 120-300 Vdc
Frequency	47-67 Hz
Inrush current	38 A max, cold start @ 25°C
Efficiency	75% typical at full load
EMI filter	Meets FCC Class B conducted CISPR 22 Class B conducted EN55022 Class B conducted VDE 0878 PT3 Class B conducted
Power factor	0.99 typical
Safety ground leakage current	1.0 mA @ 50/60 Hz, 264 Vac input
Output	
Maximum power	110 W convection (75 W with cover) 85 W convection - LPQ173 175 W with 30 CFM forced air (130 W with cover - LPQ172)
Adjustment range	3.3 - 5.5V on main; -12 - 15V on 3rd output 3.3 - 25 V on 4th output - LPQ172 3.3 - 5.5 V on 4th output - LPQ173
Hold-up time	20 ms @175 W load at nominal line
Overload protection	Short circuit protection on all outputs. Case overload protected @ 110-145% above peak rating
Overvoltage protection	Tracks outputs 1, 3 & 4; 15 to 35%
Standby output	5 V @ 200 mA regulated ±5%

**Logic Control**

AC power failure	TTL logic signal goes high 100 - 500 msec after V1 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.
DC - OK	TTL logic signal goes high after main output is in regulation. It goes low when there is a loss of regulation.

**Environmental Specifications**

Operating temperature	0 °C to 50 °C ambient. Derate each output 2.5% per degree from 50 °C to 70 °C (except for -C version).
Storage temperature	-40 °C to +85 °C
Temperature coefficient	±0.4% per °C
Electromagnetic susceptibility	Designed to meet IEC61000-4, -2, -3, -4, -5, -6, -8, -11, 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
MTBF demonstrated	>550,000 hours at full load and 25°C ambient conditions

**Ordering Information**

Model Number	Output Voltage	Minimum Load	Maximum Load with Convection Cooling	Maximum Load with 30CFM Forced Air	Peak Load <sup>1</sup>	Regulation <sup>2</sup>	Ripple P/P(PARD) <sup>3</sup>
LPQ172	5 V (3.3 - 5.5 V)	0 A	15 A	30 A	32 A	±2%	50 mV
	12 V	0 A	6 A	8 A	10 A	±3%	120 mV
	-12 V (-12 -15 V)	0 A	1.5 A	3 A	3.5 A	±3%	<1%
	±3.3-25 V	0.5 A*	2 A	5 A	5.5 A	±3%	<50mV or 1%
LPQ173	5 V (3.3 - 5.5 V)	0 A	10 A	24 A	26 A	±2%	50 mV
	12 V	0 A	6 A	8 A	10 A	±3%	120 mV
	-12V (-12 -15 V)	0 A	.2 A	3 A	3.5 A	±3%	<1%
	5 V (3.3 - 5.5 V)	0 A	10 A	24 A	26 A	±2%	50 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 3.3 - 25 V factory set at 5 V.

5. \*Minimum loads are required when output set below 5 Volts

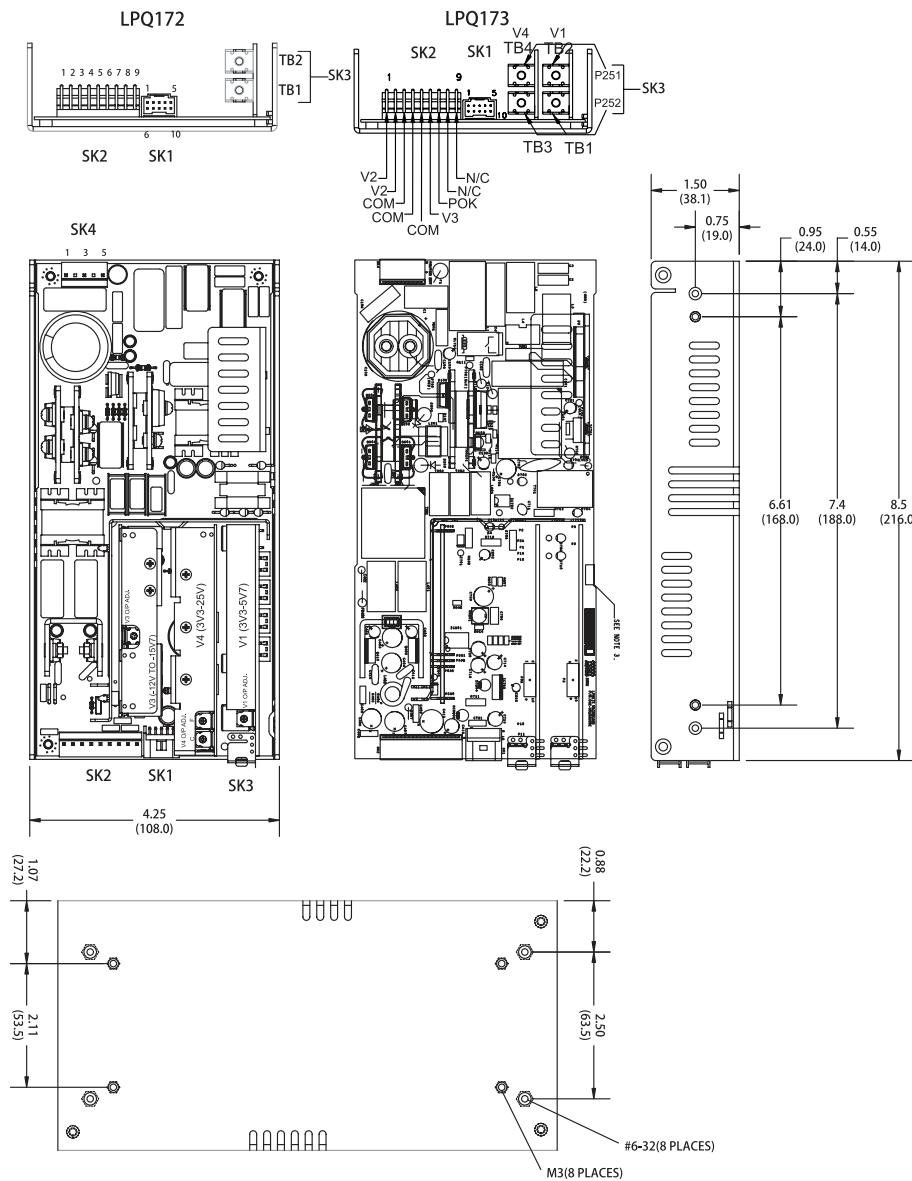
6. Remote inhibit resets OVP latch

7. LPQ173-C has no convection rating.

8. 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.

Note: -C suffix added to the model number indicates cover option and is limited to 50 °C operation.

## Mechanical Drawing



## Notes:

1. Specifications subject to change without notice.
2. All dimensions in inches (mm), tolerance is  $\pm 0.02"$ .
3. Specifications are for convection rating at factory settings unless otherwise stated.
4. Mounting screw maximum insertion depth is 0.12".
5. Warranty: 2 years
6. Weight: 2 lb/0.91 kg

## Pin Assignments

Connector		LPQ172	LPQ173
<b>SK1</b>	PIN 1	N/C	V4 SWP
	PIN 2	5V Standby	5 V Standby
	PIN 3	N/C	+V4 Sense
	PIN 4	V1 SWP	V1 SWP
	PIN 5	Common	Common
	PIN 6	+V1 sense	+V1 sense
	PIN 7	Sense common	Sense common
	PIN 8	Remote inhibit	Remote inhibit
	PIN 9	DC power good	DC power good
	PIN 10	POK	POK
<b>SK2</b>	PIN 1,2	+12 V	+12V
	PIN 3,4,5	Common	Common
	PIN 6	-12 V	-12V
	PIN 7	POK	POK
	PIN 8	+3.3 V to +25 V (Float)	N/C
<b>SK3</b>	PIN 9	Common (Float)	N/C
	TB-1, 3	COMMON	COMMON
	TB-2	+5 V (3.3V to 5.5V)	+5V (3.3V to 5.5V)
<b>SK4</b>	TB-4	N/C	+5V (3.3V to 5.5V)
	PIN 1	GROUND	GROUND
	PIN 3	LINE	LINE
	PIN 5	NEUTRAL	NEUTRAL

## Mating Connectors

(SK4) AC Input	Molex 09-50-8051 (USA) Molex 09-91-0500 (UK) PINS: 08-58-0111
(SK3) Main output	Molex series 19141-0058/0063
(SK2) Aux DC Output/Power fail	Molex 09-50-8091 (USA) Molex 09-91-0900 (UK) PINS: 08-58-0111
(SK1) Control Signals	Molex 90142-0010 (USA) PINS: 90119-2110 or Amp: 87977-3 PINS: 87309-8

Astec connector kit #70-841-015, includes all of above

## WORLDWIDE OFFICES

## Americas

2900 South Diablo Way  
Suite B100  
Tempe, AZ 85282, USA  
+1 888 412 7832

## Europe (UK)

Ground Floor Offices, Barberry House  
4 Harbour Buildings, Waterfront West  
Brierley Hill, West Midlands  
DVs 1LN, UK  
+44 (0) 1384 842 211

## Asia (HK)

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

**ARTESYN**  
An Advanced Energy Company

[www.artesyn.com](http://www.artesyn.com)

Artesyn Embedded Technologies, Artesyn Embedded Power, Artesyn, and all Artesyn related logos are trademarks and service marks of Artesyn Embedded Technologies, Inc. All other names and logos referred to are trade names, trademarks, or registered trademarks of their respective owners. Specifications are subject to change without notice. © 2019 Artesyn Embedded Technologies, Inc. All rights reserved. For full legal terms and conditions, please visit [www.artesyn.com/legal](http://www.artesyn.com/legal).

For more information: [www.artesyn.com](http://www.artesyn.com)  
For support: [productsupport.ep@artesyn.com](mailto:productsupport.ep@artesyn.com)

LPQ170 Series-DS 19Dec2019

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Artesyn Embedded Technologies](#):

[LPQ172](#) [LPQ172-C](#) [LPQ173](#) [LPQ173-C](#)