Embedded Power for Business-Critical Continuity

KOHS

Rev. 07.01.08 LPQ170 Series

1 of 4

LPQ170 Series 175 Watts

Total Power: Input Voltage:

# of Outputs:

110 - 175 Watts 85-264 Vac 120-300 Vdc Quad



# 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:	<ul> <li>3.3 - 5.5V on main; -12 - 15V on 3rd output</li> <li>3.3 - 25 V on 4th output - LPQ172</li> <li>3.3 - 5.5 V on 4th output - LPQ173</li> </ul>
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%





**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)

Safety

0805/EN60950
(IEC950)
UL60950
Certificate and report
CSA 22.2-234 Level 3
Mark (LVD)
EN 60950/EMKO-TUE

# **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
Rer	mote inhibit	Requires contact closure to inhibit outputs
Rer	mote 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° to 50 °C ambient. Derate each output 2.5% per degree from 50° 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 IE61000-4, -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 0.75G peak 5Hz to 500Hz, operational
MTBF demonstrated:	>550,000 hours at full load and 25°C ambient conditions

# **Ordering Information**

<b>Model</b> Number LPQ172	Output Voltage 5 V (3.3 - 5.5 V) 12 V -12 V (-12 -15 V) +3.3-25 V	<b>Load</b> 0 A 0 A	Maximum Load with Convection Cooling 15 A 6 A 1.5 A 2 A	Maximum Load with 30CFM forced Air 30 A 8 A 3 A 5 A	Peak Load <sup>1</sup> 32 A 10 A 3.5 A 5.5 A	Regulation 2 ±2% ±3% ±3%	<b>Ripple P/P</b> (PARD) <sup>3</sup> 50 mV 120 mV <1% <50 mV 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  $\mu F$  in parallel with a 0.1  $\mu F$  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.

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

#### 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 year
- 6. Weight: 2 lb / 0.91 kg

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#### Americas

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