

## LPQ142 Series

145 Watts

### Data Sheet

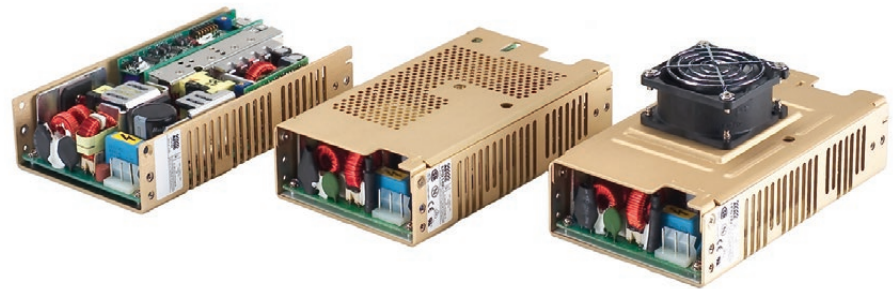
**Total Power:** 110 - 145 Watts  
**Input Voltage:** 85 - 264 Vac  
 120 - 300 Vdc  
**# of Outputs:** Quad

### 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
- Adjustable floating 4th output
- RoHS compliant
- Optional cover (-C suffix)
- Optional fan cover (-CF suffix)

### SAFETY

- VDE 60950
- UL 60950
- CB Certificate and report
- CSA 60950
- 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<br>CISPR 22 Class B conducted<br>EN55022 Class B conducted<br>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                 | 80 W convection (60 W with cover -C)<br>145 W with 30 CFM forced air<br>(100 W with cover -C)                            |
| Adjustment range              | 3.3 - 5.5V on main; -12 - 15V on 3rd output<br>3.3 - 25 V on 4th output  |
| 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; 10 to 35%   |

| 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 inhibit   | Requires contact closure to inhibit outputs  |
| 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° 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 |                   |              |                                      |                                    |                        |                         |                                |
|----------------------|-------------------|--------------|--------------------------------------|------------------------------------|------------------------|-------------------------|--------------------------------|
| 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> |
| LPQ142               | 5 V (3.3 - 5.5 V) | 0 A          | 12 A                                 | 25 A                               | 27 A                   | ±2%                     | 50 mV                          |
|                      | 12 V              | 0 A          | 5 A                                  | 6 A                                | 9 A                    | ±3%                     | 120 mV                         |
|                      | -12V (-12 -15 V)  | 0 A          | 1 A                                  | 1.5 A                              | 2 A                    | ±3%                     | <1%                            |
|                      | ±3.3-25 V         | 0.5 A        | 1.5 A                                | 4.5 A                              | 5 A                    | ±3%                     | <50mV or 1%                    |

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. Fourth (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. 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.

-CF suffix added to the model number indicates fan cover option.

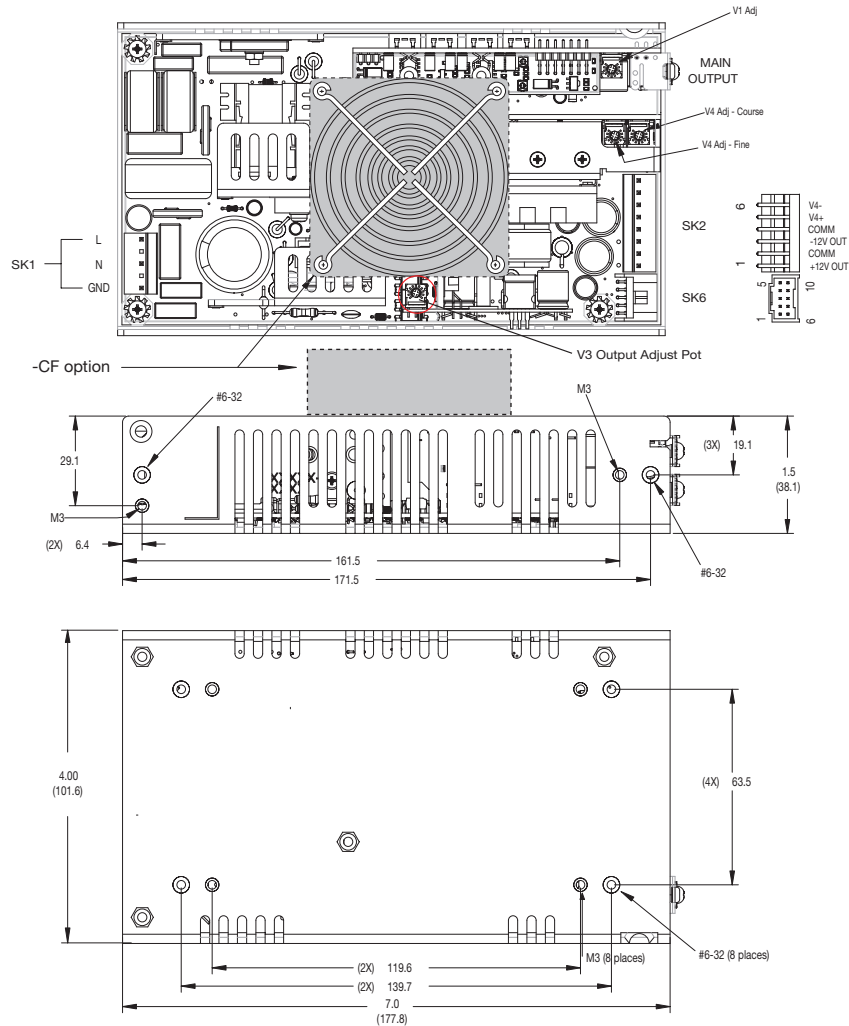
| Pin Assignments |       |                       |
|-----------------|-------|-----------------------|
| SK1             | PIN 1 | Ground                |
|                 | PIN 3 | Neutral               |
|                 | PIN 5 | Line                  |
| SK2             | PIN 1 | +12 V                 |
|                 | PIN 2 | Common                |
|                 | PIN 3 | -12 V                 |
|                 | PIN 4 | Common                |
|                 | PIN 5 | +5 V to +25 V (float) |
| SK4             | TB-1  | Common                |
|                 | TB-2  | +5 V                  |

| Pin Assignments |        |              |
|-----------------|--------|--------------|
| SK6             | PIN 1  | N/C          |
|                 | PIN 2  | DC OK        |
|                 | PIN 3  | N/C          |
|                 | PIN 4  | V1 SWP       |
|                 | PIN 5  | Common       |
|                 | PIN 6  | +V1 sense    |
|                 | PIN 7  | Sense common |
|                 | PIN 8  | + inhibit    |
|                 | PIN 9  | - inhibit    |
|                 | PIN 10 | Power fail   |

| Mating Connectors     |  |
|-----------------------|--|
| (SK1) AC Input        | Molex 09-50-8051 (USA)<br>Molex 09-91-0500 (UK)<br>PINS: 08-58-0111            |
| (SK2) Aux DC Output   | Molex 09-50-8061 (USA)<br>Molex 09-91-0600 (UK)<br>PINS: 08-58-0111            |
| (SK6) Control Signals | Molex 90142-0010 (USA)<br>PINS: 90119-2110 or<br>Amp: 87977-3<br>PINS: 87309-8 |
| (SK4) Main Output     | Molex BB-19141-0058  |

Artesyn Embedded Technologies connector kit #70-841-017, includes all of the above.

## 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 year
6. Weight: 1.63 lb/0.74 kg

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