

## LPS170 Series

### 175 Watts

**Total Power:** 100 - 175 Watts  
**Input Voltage:** 85-264 VAC  
120-300 VDC  
**# of Outputs:** Single



## Special Features

- Active power factor correction
- IEC EN61000-3-2 compliance
- Wide Range Adjustable output
- 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
- 12 V Aux output
- Optional cover (-C suffix)

## Safety

- **VDE** 0805/EN60950 (IEC950)
- **UL** UL1950
- **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:                     | 47-63 Hz   |
| Inrush current:                | 38 A max, cold start @ 25°C  |
| Efficiency:                    | 75% typical at full load   |
| EMI filter:                    | 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:          | 110 W convection (75 W with cover)<br>175 W with 30 CFM forced air<br>(130 W with cover)         |
| Adjustment range:       | 2:1 wide ratio minimum   |
| Standby outputs:        | 5 V @ 2 A regulated ±5%  |
| Hold-up time:           | 20 ms @175 W load at nominal line  |
| Overload protection:    | Short circuit protection on all outputs.<br>Case overload protected @ 110-145% above peak rating |
| Overvoltage protection: | 10% to 40% above nominal output  |
| Aux output:             | 12 V @ 1 A -5 %, +10%  |



### Logic Control

|                 |  |
|-----------------|--|
| 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    |

### Pin Assignments

| Connector | LPS17x |                |
|-----------|--------|----------------|
| SK1       | PIN 1  | +12 V          |
|           | PIN 2  | 5 V Standby    |
|           | Pin 3  | Common         |
|           | Pin 4  | V1 SWP         |
|           | PIN 5  | Common         |
|           | PIN 6  | +V1 sense      |
|           | PIN 7  | Sense common   |
|           | PIN 8  | Remote inhibit |
|           | PIN 9  | DC power good  |
|           | PIN 10 | POK            |
| SK2       | TB-1   | COMMON         |
|           | TB-2   | Main output    |
| SK3       | PIN 1  | GROUND         |
|           | PIN 2  | LINE           |
|           | Pin 5  | NEUTRAL        |

## Environmental Specifications

|                                 |   |
|---------------------------------|---|
| Operating temperature:          | 0° to 50 °C ambient;<br>derate each output at 2.5% per degree from 50° to 70 °C                                       |
| Low temperature start:          | -20 °C  |
| Temperature coefficient:        | ±0.4% per °C  |
| Storage temperature:            | -40° to 85 °C   |
| Electromagnetic susceptibility: | Designed to meet IEC EN61000-4, -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  |

### Mating Connectors

|  |  |
|--|--|
| AC Input (SK3):  | Molex 09-50-8051 (USA)<br>Molex 09-91-0500 (UK)<br>PINS: 08-58-0111            |
| DC Outputs (SK2):  | Molex 19141-0058   |
| Control Signals (SK1):   | Molex 90142-0010 (USA)<br>PINS: 90119-2110 or<br>Amp: 87977-3<br>PINS: 87309-8 |
| Emerson Network Power Connector Kit #70-841-016, includes all of the above                                       |  |
| 1. Specifications subject to change without notice.  |  |
| 2. All dimensions in inches (mm), tolerance is ±0.02" (±0.5mm)   |  |
| 3. Mounting holes M1 and M2 should be grounded for EMI purposes.   |  |
| 4. Mounting hole M1 is safety ground connection.   |  |
| 5. Specifications are for convection rating at factory settings at 115 VAC input, 25 °C unless otherwise stated. |  |
| 6. Warranty: 2 year  |  |
| 7. Weight: 1.8 lbs/0.85 kg   |  |

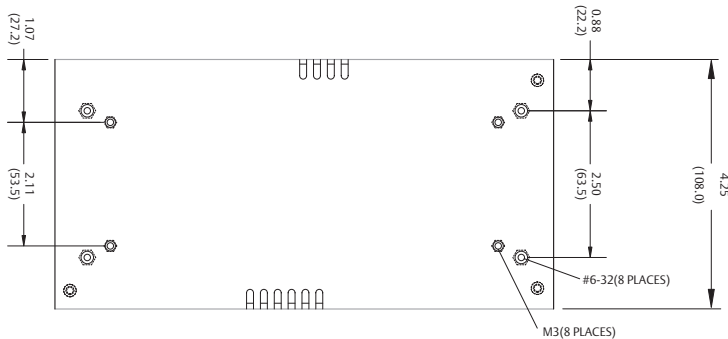
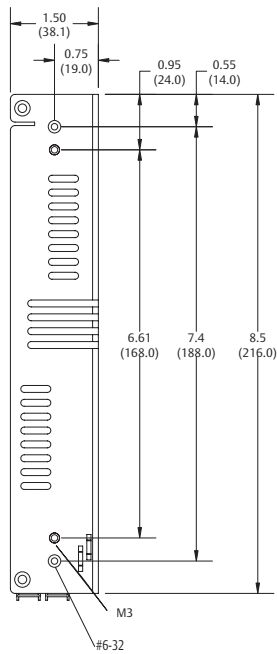
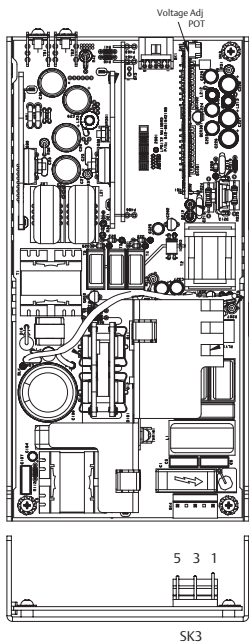
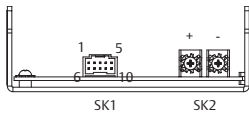
### Ordering Information

| 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> |
|--------------|------------------|--------------|--------------------------------------|------------------------------------|------------------------|-------------------------|--------------------------------|
| LPS172       | 5 V (2.5 - 6 V)  | 0 A          | 22 A                                 | 35 A                               | 38 A                   | ±2%                     | 50 mV                          |
| LPS173       | 12 V (6 - 12 V)  | 0 A          | 9.1 A                                | 15 A                               | 16.5 A                 | ±2%                     | 120 mV                         |
| LPS174       | 15 V (12 - 24 V) | 0A           | 7.3 A                                | 12 A                               | 13.2 A                 | ±2%                     | <1%                            |
| LPS175       | 24 V (24 - 54 V) | 0A           | 4.5 A                                | 7.5 A                              | 8.2 A                  | ±2%                     | <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. Remote inhibit resets OVP latch.

Note: -C suffix added to the model number indicates cover option.

Mechanical Drawing



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