

LPS170 Series

175 Watts

Data Sheet

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)
- RoHS compliant

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 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) 175 W with 30 CFM forced air (130 W with cover) |
| Adjustment range | 2:1 wide ratio minimum |
| Standby outputs | 5 V @ 2 A regulated $\pm 5\%$ |
| 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 | 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 |

Environmental Specifications

| | |
|--------------------------------|---|
| Operating temperature | 0° to 50 °C ambient; 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 |

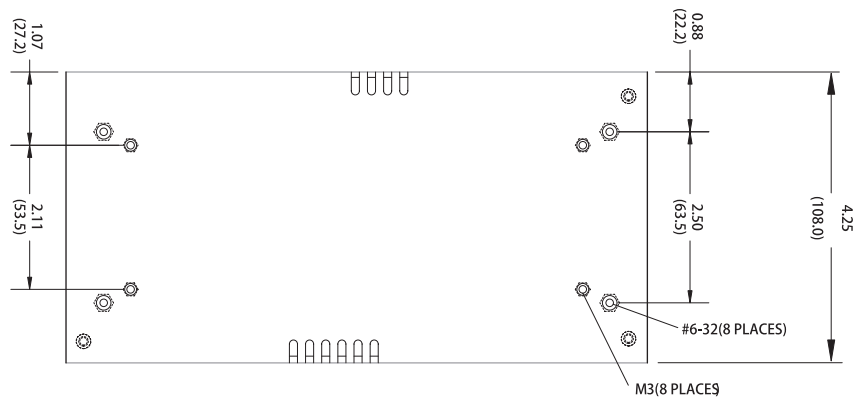
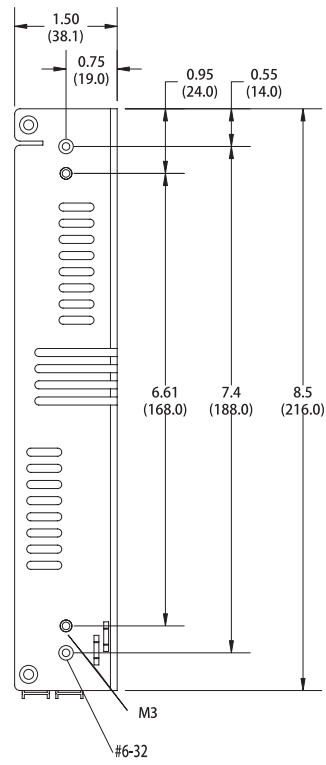
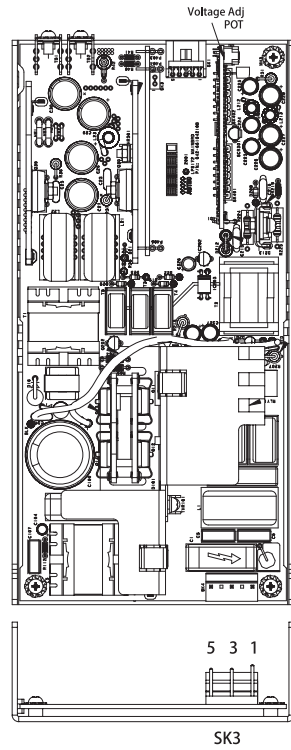
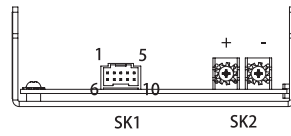
Ordering Information

| Model Number | Output Voltage | Minimum Load | Maximum Load with Convection Cooling | Maximum Load with 30CFM Forced Air | Peak Load ¹ | Regulation ² | Ripple P/P(PARD) ³ |
|--------------|------------------|--------------|--------------------------------------|------------------------------------|------------------------|-------------------------|-------------------------------|
| 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) | 0 A | 7.3 A | 12 A | 13.2 A | ±2% | <1% |
| LPS175 | 24 V (24 - 54 V) | 0 A | 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.
5. 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.

Mechanical Drawing



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 |

Mating Connectors

| | |
|--|--|
| AC Input (SK3) | Molex 09-50-8051 (USA) Molex 09-91-0500 (UK) PINS: 08-58-0111 |
| DC Outputs (SK2) | Molex 19141-0058 |
| Control Signals (SK1) | Molex 90142-0010 (USA) PINS: 90119-2110 or Amp: 87977-3 PINS: 87309-8 |
| Artesyn Embedded Technologies 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 " (± 0.5 mm)
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 years
7. Weight: 1.8 lbs/0.85 kg

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