

LPS170-M Series

Medical
175 Watts

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



Special Features

- Medical safety approvals
- 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** 0750/EN60601-1 (IEC601)
- **UL** UL2601
- **CSA** CSA 22.2 No. 601.1
- **CE** Mark (LVD)

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: | 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: | <250 μ A @ 50/60 Hz, 264 VAC inputs |

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-M | 5 V (2.5 - 6 V) | 0 A | 22 A | 35 A | 38 A | ±2% | 50 mV |
| LPS173-M | 12 V (6 - 12 V) | 0 A | 9.1 A | 15 A | 16.5 A | ±2% | 120 mV |
| LPS174-M | 15 V (12 - 24 V) | 0A | 7.3 A | 12 A | 13.2 A | ±2% | <1% |
| LPS175-M | 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.

Notes:

1. Specifications subject to change without notice.
2. All dimensions in inches (mm), tolerance is ±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: 1.8 lb / 0.85 kg

Pin Assignments

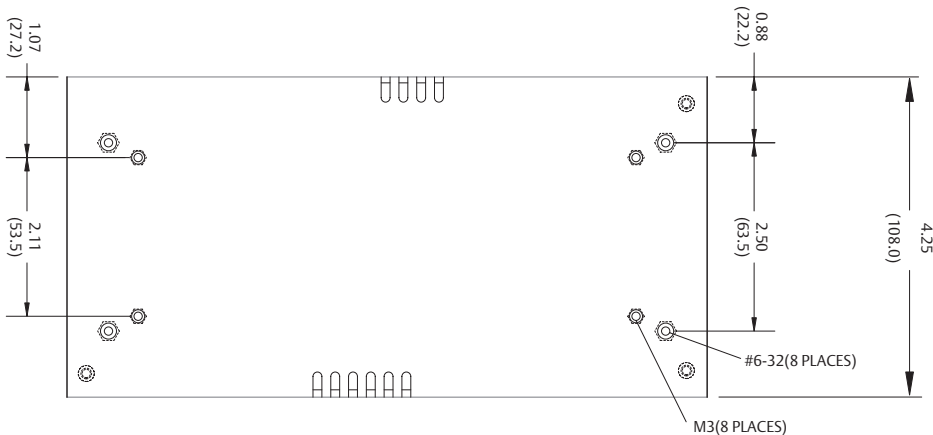
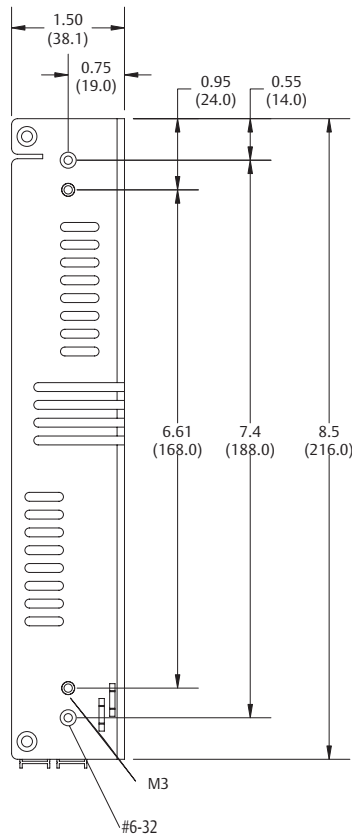
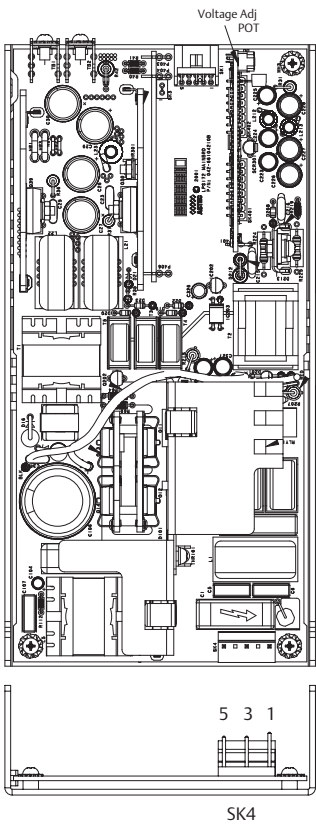
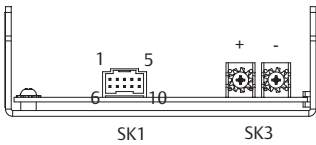
| Connector | LPS17x | |
|-----------|--------|----------------|
| SK1 | PIN 1 | +12 V |
| | PIN 2 | 5 V Standby |
| SK2 | Pin 3 | Common |
| | Pin 4 | V1 SWP |
| | PIN 5 | Common |
| | PIN 6 | +V1 sense |
| | PIN 7 | Sense common |
| | PIN 8 | Remote inhibit |
| | PIN 9 | DC poer good |
| | PIN 10 |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

Mating Connectors

| | |
|------------------------|--|
| AC Input (SK4): | Molex 09-50-8051 (USA) Molex 09-91-0500 (UK) PINS: 08-58-0111 |
| DC Outputs (SK3): | Molex 19141-0058 |
| Control Signals (SK1): | Molex 90142-0010 (USA) PINS: 90119-2110 or Amp: 87977-3 PINS: 87309-8 |

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