# LPT50-M Series

50 Watts

**Total Power:** **47 - 55 Watts**
**Input Voltage:** **90-264 VAC**
**127-300 VDC**
**# of Outputs:** **Triple**

## Special Features

- Medical Safety Approvals
- Universal input
- 2" x 4" footprint
- Overpower and short circuit protection
- High efficiency
- High MTBF
- Built in EMI filter (CISPR 22 Class B)
- LED power good indicator
- Input power <74 watts
- Complies with EN61000-3-2
- UL Class I approved

## Safety

| | |
|---|---|
| UL | UL 60601-1 |
| CSA | CSA-C22.2 No. 601.1-M90 |
| VDE | EN60601-1 |
| CE | LVD |

## Electrical Specifications

| Input | |
|---|---|
| Input range | 90-264 VAC (wide range) 127-300 VDC |
| Frequency | 47-440 Hz |
| Inrush current | <60 A peak @ 230 VAC, cold start @ 25°C |
| Efficiency | 80% typical at full load |
| EMI RFI | FCC Class B conducted; CISPR 22 Class B conducted: EN55022 Class B conducted, EN60601-1-2 |
| Safety ground leakage current | 275uA @ 50/60 Hz, 264 VAC input |
| **Output** | |
| Maximum power | 55 W for convection (LPT51, 47.4W) |
| Hold-up time | 10/20 ms 115/230 VAC input line |
| Overpower protection | Short circuit protection on all outputs<br>Case overpower protected @ 110-160% of normal rating |
| Overvoltage protection | 30-50% above nominal output |

## Environmental Specifications

| | |
|---|---|
| Operating temperature: | 0° to 50°C ambient. Derate each output 2.5% per degree from 50° to 70°C. -20°C start up |
| Storage temperature: | -40°C to +85°C |
| Electromagnetic susceptibility: | Designed to meet EN61000-4; -2, -3, -4, -5, -6, -8, -11 Level 3 |
| Humidity: | Operating; non-condensing 10% to 95% RH |
| Vibration: | IEC68-2-6 to the levels of IEC721-3-2 |
| MTBF demonstrated: | >550,000 hours at full load and 25°C ambient conditions |

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## Ordering Information

| Model Number | Output Voltage | Minimum Load | Maximum Load with Convection Cooling | Peak Load 1 | Regulation 2 | Ripple P/P (PARD)3 |
|---|---|---|---|---|---|---|
| LPT51-M | +3.3V | 0.8A | 8A | 9A | ±2% | 50 mV |
| | +5V | 0.1A | 3A | 4A | ±6% | 50mV |
| | +12V | 0A | 0.5A | 1A | ±5% | 120mV |
| LPT52-M | +5V | 0.5A | 8A | 9A | ±2% | 50 mV |
| | +12V | 0.1A | 3A | 4A | ±5% | 120mV |
| | -12V | 0A | 0.5A | 1.0A | ±5% | 120mV |
| LPT53-M | +5V | 0.5A | 8A | 9A | ±2% | 50 mV |
| | +15V | 0.1A | 2.4A | 3.2A | ±5% | 150mV |
| | -15V | 0A | 0.5A | 0.7A | ±5% | 150mV |
| LPT54-M | +5V | 0.5A | 8A | 9A | ±2% | 50 mV |
| | +24V | 0.1A | 1.5A | 2A | ±7% | 240mV |
| | +12V | 0A | 0.5A | 0.7A | ±5% | 120mV |

1. Peak current lasting <15 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 (tantalum capacitor) in parallel with a 0.1 μF capacitor at rated line voltage and load ranges.

## Pin Assignments

| Connector | LPT51-M | LPT52-M | LPT53-M | LPT54-M |
|---|---|---|---|---|
| SK1-1 | Line | Line | Line | Line |
| SK1-3 | Neutral | Neutral | Neutral | Neutral |
| SK2-1 | +3.3 V | +5 V | +5V | +5V |
| SK2- 2 | +2.3 V | +5 V | +5V | +5V |
| SK2- 3 | Common | Common | Common | Common |
| SK2-4 | Common | Common | Common | Common |
| SK2-5 | 12V | -12V | -15V | +12V |
| SK2-6 | 5V | +12V | +15V | +24 |

## Mating Connectors

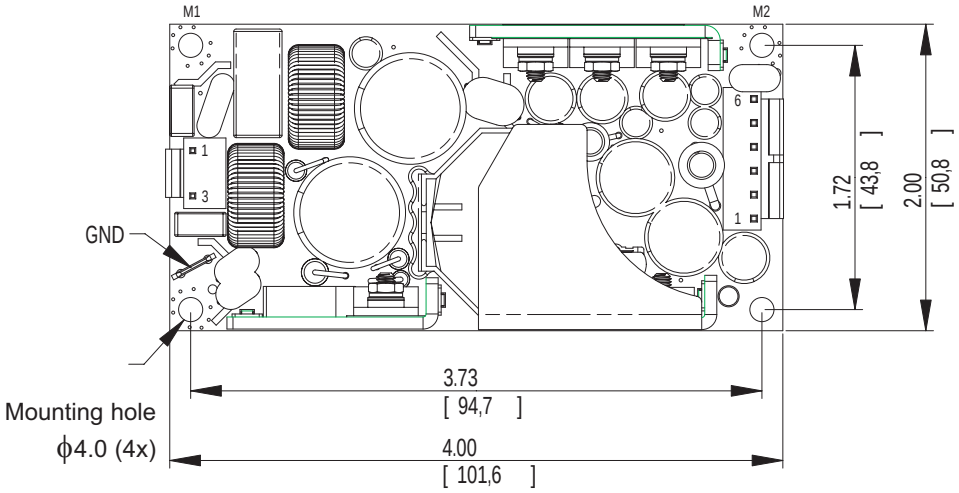
AC Input: Molex 09-50-8031 (USA)
09-91-0300 (UK)
PINS: 08-52-0113

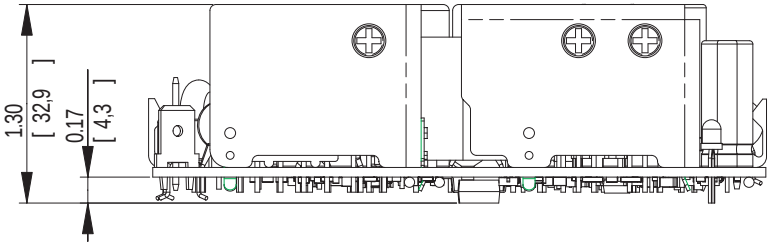
DC Outputs: Molex 09-50-8061 (USA)
09-91-0600 (UK)
PINS: 08-52-0113

Astec Connector Kit #70-841-006, 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: 1 year
7. Weight: 0.45lbs/0.20kg

## Mechanical Drawing

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