

Embedded Power for
Business-Critical Continuity

LPT50-M Series

50 Watts

Total Power: 47 - 50 Watts
Input Voltage: 90 - 264 VAC
127 - 300 VDC
of Outputs: Triple



Rev. 1.08.09_148
LPT50-M Series
1 of 3



Special Features

- Medical Safety Approvals
- Universal input
- 2" x 4" footprint
- Less than 1U high
- 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
- 85 kHz switching frequency
- Dual AC fuses
- UL Class I approved
- LPX50 enclosure kit available

Safety

- **UL:** UL 60601-1
- **CSA:** CSA-C22.2 No. 601.1-M90
- **VDE:** EN60601-1
- **CC:** 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: 50W for convection (LPT51, 47.4 W)
Hold-up time: 10/20 ms 115/230 VAC input line
Overpower protection: Short circuit protection on all outputs.
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 as 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



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	+3.3 V	0.8 A	8 A	9 A	±2%	50 mV
	+5 V	0.1 A	3 A	4 A	±6%	50 mV
	+12 V	0 A	0.5 A	1 A	±5%	120 mV
LPT52-M	+5 V	0.5 A	8 A	9 A	±2%	50 mV
	+12 V	0.1 A	3 A	4 A	±5%	120 mV
	-12 V	0 A	0.5 A	1 A	±5%	120 mV
LPT53-M	+5 V	0.5 A	8 A	9 A	±2%	50 mV
	+15 V	0.1 A	2.4 A	3.2 A	±5%	150 mV
	-15 V	0 A	0.5 A	0.7 A	±5%	150 mV
LPT54-M	+5 V	0.5 A	8 A	9 A	±2%	50 mV
	+24 V	0.1 A	1.5 A	2 A	±7%	240 mV
	+12 V	0 A	0.5 A	0.7 A	±5%	120 mV

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.

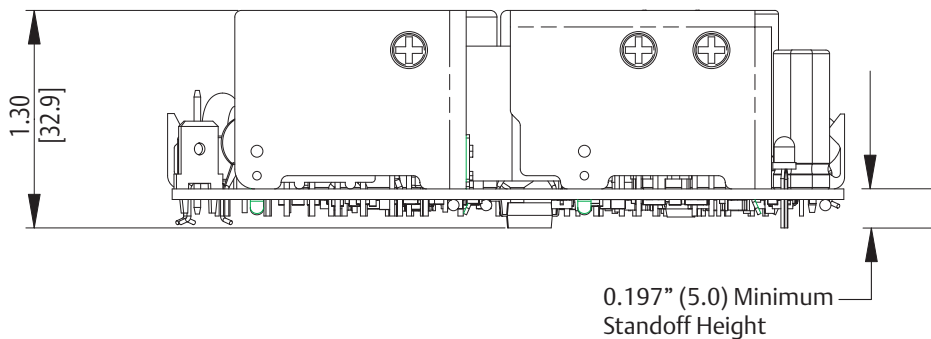
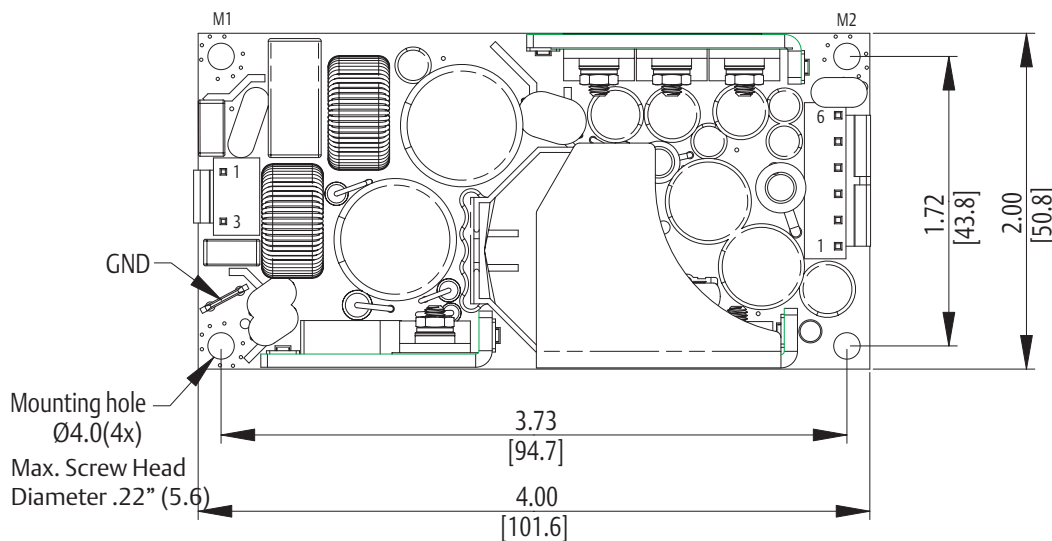
Pin Assignments

	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	+5 V	+5 V
SK2-2	+3.3 V	+5 V	+5 V	+5 V
SK2-3	Common	Common	Common	Common
SK2-4	Common	Common	Common	Common
SK2-5	+12 V	-12 V	-15 V	+12 V
SK2-6	5 V	+12 V	+15 V	+24 V

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
Emerson Network Power Connector Kit #70-841-006, includes all of the above	
Notes:	
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: 0.45lbs/0.20kg	

Mechanical Drawing



Americas

5810 Van Allen Way
Carlsbad, CA 92008
USA
Telephone: +1 760 930 4600
Facsimile: +1 760 930 0698

Europe (UK)

Waterfront Business Park
Merry Hill, Dudley
West Midlands, DY5 1LX
United Kingdom
Telephone: +44 (0) 1384 842 211
Facsimile: +44 (0) 1384 843 355

Asia (HK)

14/F, Lu Plaza
2 Wing Yip Street
Kwun Tong, Kowloon
Hong Kong
Telephone: +852 2176 3333
Facsimile: +852 2176 3888

For global contact, visit:

www.PowerConversion.com

techsupport.embeddedpower@emerson.com

While every precaution has been taken to ensure accuracy and completeness in this literature, Emerson Network Power assumes no responsibility, and disclaims all liability for damages resulting from use of this information or for any errors or omissions.

Emerson Network Power.

The global leader in enabling business-critical continuity.

- AC Power
- Connectivity
- DC Power
- Embedded Computing
- Embedded Power**
- Monitoring
- Outside Plant
- Power Switching & Controls
- Precision Cooling
- Racks & Integrated Cabinets
- Services
- Surge Protection

EmersonNetworkPower.com

Emerson Network Power and the Emerson Network Power logo are trademarks and service marks of Emerson Electric Co.
©2008 Emerson Electric Co.