# LPS50-M Series

60 Watts

 Total Power:
 55 - 60 Watts

 Input Voltage:
 90 - 264 VAC

 127 - 300 VDC

# of Outputs: Single



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## **Special Features**

- Medical Safety Approvals
- Universal input
- Less than 1U high
- 2" x 4" footprint
- Remote sense
- Overload and short circuit protection
- Adjustable Output Voltage
- 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
- LPX50 enclosure kit available
- Dual AC fuses

## Safety

• **UL:** UL60601-1

• CSA: CSA-C22.2 No. 601.1-M90

VDE: EN60601-1 CE: LVD & EMC

## **Electrical Specifications**

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				
Input power:	< 74 Watts				
Efficiency:	80% - 85% typical at full load				
EMI/RFI:	FCC Class B conducted; CISPR 22 Class B conducted; EN55022 Class B conducted, VDE0878PT3 Class B conducted				
Safety ground leakage current:	275 uA @ 50/60 Hz; 264 VAC input				
Output					
Maximum power:	60 W for convection (LPS52, 55 W)				
Adjustment range:	± 20% minimum				
Hold-up time:	10/20 ms 115/230 VAC input line				
Overload protection:	Short circuit protection on all outputs. Case overload protected @ 110 - 160% of normal rating				
Overvoltage protection:	30 - 50% above nominal output				
Remote sense:	Compensates for 0.5 V lead drop max. Will operate without remote sense connected. Reverse connection protected.				



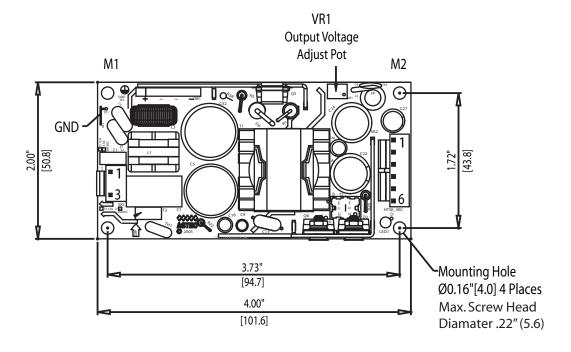


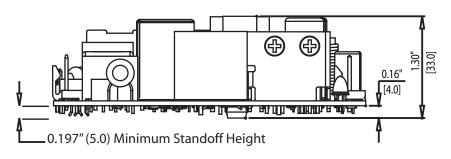
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# **Environmental Specifications**

Operating temperature:	0° to 50 °C ambient derate each output as 2.5% per degree from 50° to 70 °C20 °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

### Mechanical Drawing





Ordering Information										
Model Number	Output Voltage	Minimum Load	Maximum Load with Convection Cooling	Maximum Load with 30CFM Forced Air	Peak Load¹	Regulation <sup>2</sup>	Ripple P/P (PARD) <sup>3</sup>			
LPS52-M	5 V	0 A	11 A	12 A	13 A	± 2%	50 mV			
LPS53-M	12 V	0 A	5 A	5.4 A	5.5 A	± 2%	120 mV			
LPS54-M	15 V	0 A	4 A	4.4 A	4.4 A	± 2%	150 mV			
LPS55-M	24 V	0 A	2.5 A	2.75 A	2.75 A	± 2%	240 mV			
LPS58-M	48 V	0 A	1.25 A	1.35 A	1.38 A	± 2%	480 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  $\mu$ F (tantalum capacitor) in parallel with a 0.1  $\mu$ F capacitor at rated line voltage and load ranges.

Pin Assignments									
Connector	LPS52-M	LPS53-M	LPS54-M	LPS55-M	LPS58-M				
SK1-1	Line	Line	Line	Line	Line				
SK1-3	Neutral	Neutral	Neutral	Neutral	Neutral				
SK2-1	+5 V	+12 V	+15 V	+24 V	+48 V				
SK2-2	+5 V	+12 V	+15 V	+24 V	+48 V				
SK2-3	Common	Common	Common	Common	Common				
SK2-4	Common	Common	Common	Common	Common				
SK2-5	-Sense	-Sense	-Sense	-Sense	-Sense				
SK2-6	+Sense	+Sense	+Sense	+Sense	+Sense				

#### **Mating Connectors**

AC Input: Molex 09-50-8031 (USA)

09-93-0300 (UK) PINS: 08-52-0113

DC Outputs: Molex 09-50-8061 (USA)

09-93-0600 (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  $\pm 0.02$ " ( $\pm 0.5$ 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 year
- 7. Weight: 0.41lbs/0.18kg

#### Americas

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