

LPS50-M Series

60 Watts

Data Sheet

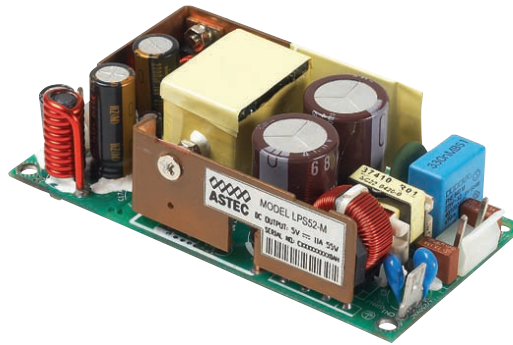
Total Power: 55 - 60 Watts
Input Voltage: 90 - 264 Vac
127 - 300 Vdc
of Outputs: Single

SPECIAL FEATURES

- Medical safety approvals
- Universal input
- 2" x 4" footprint
- Less than 1U high
- 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
- RoHS compliant
- UL Class I approved
- LPX100 enclosure kit available
- Dual AC fuses

SAFETY

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



Electrical Specifications

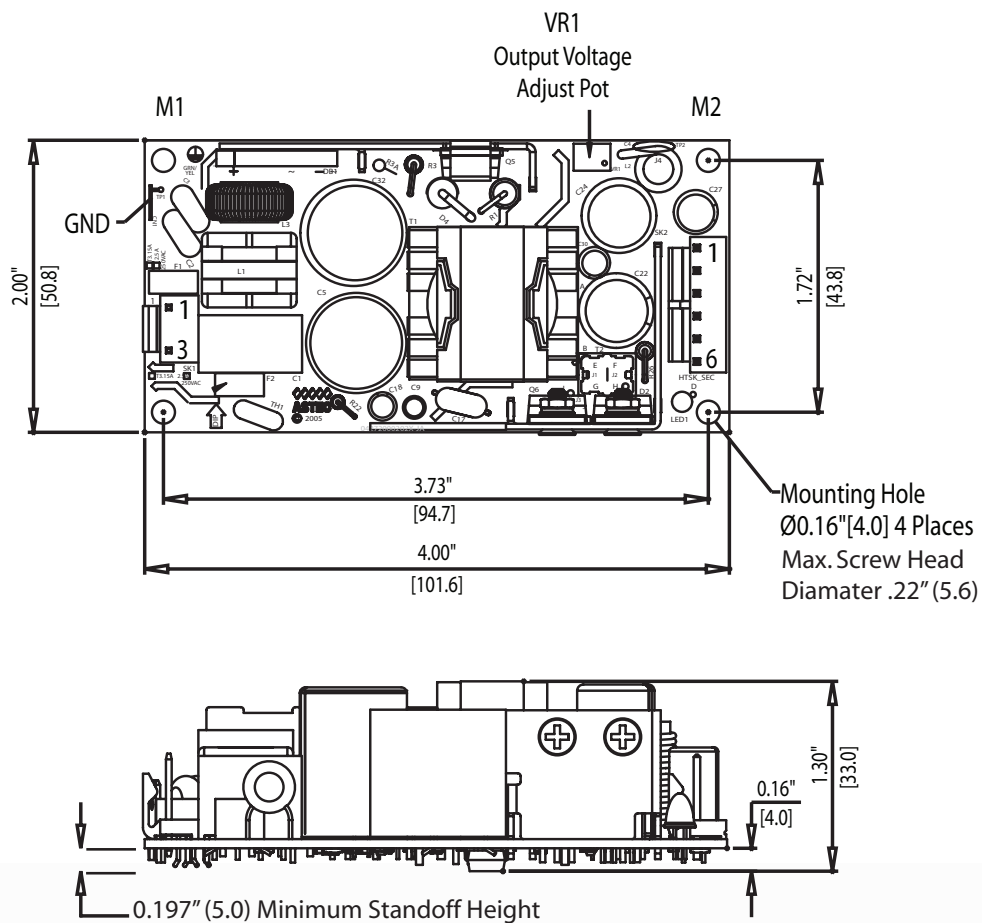
Input	
Input range	90 - 264 Vac (wide range) 127 - 300 Vdc ¹
Frequency	47 - 63 / 440 Hz (Safety rating 50/60 Hz)
Inrush current	<60 A peak @ 230 Vac, cold start @ 25 °C
Input power	<74 Watts
Efficiency	80 - 85% typical at full load
EMI/RFI	FCC Class B conducted; CISPR22 Class B conducted; EN55022 Class B conducted; VDE0878PT3 Class B conducted.
Safety ground leakage current	275 µA @ 50/60 Hz; 264 Vac input
Output	
Maximum power	60 W for convection (LPS52 is 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% to 50% above nominal output
Remote sense	Compensates for 0.5 V lead drop max. Will operate without remote sense connected. Reverse connection protected.

¹DC input rating is not part of the product's Safety approval.

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 IEC61000-4-2, -4-3, -4-4, -4-5, -4-6, -4-8, -4-11 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 Drawings



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
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 µF (tantalum capacitor) in parallel with a 0.1 µF capacitor at rated line voltage and load ranges.
4. This product is a Component Power Supply and is only for inclusion by professional installers with 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.

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
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" (± 0.5 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: 0.41lbs/0.18kg

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