



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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LPS50-M Series

60 Watts

Data Sheet

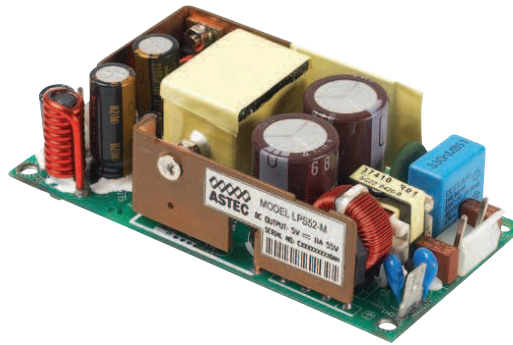
Total Power: 55 - 60 Watts
Input Voltage: 90 - 264 Vac
127 - 300 Vdc
of Outputs: Single

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

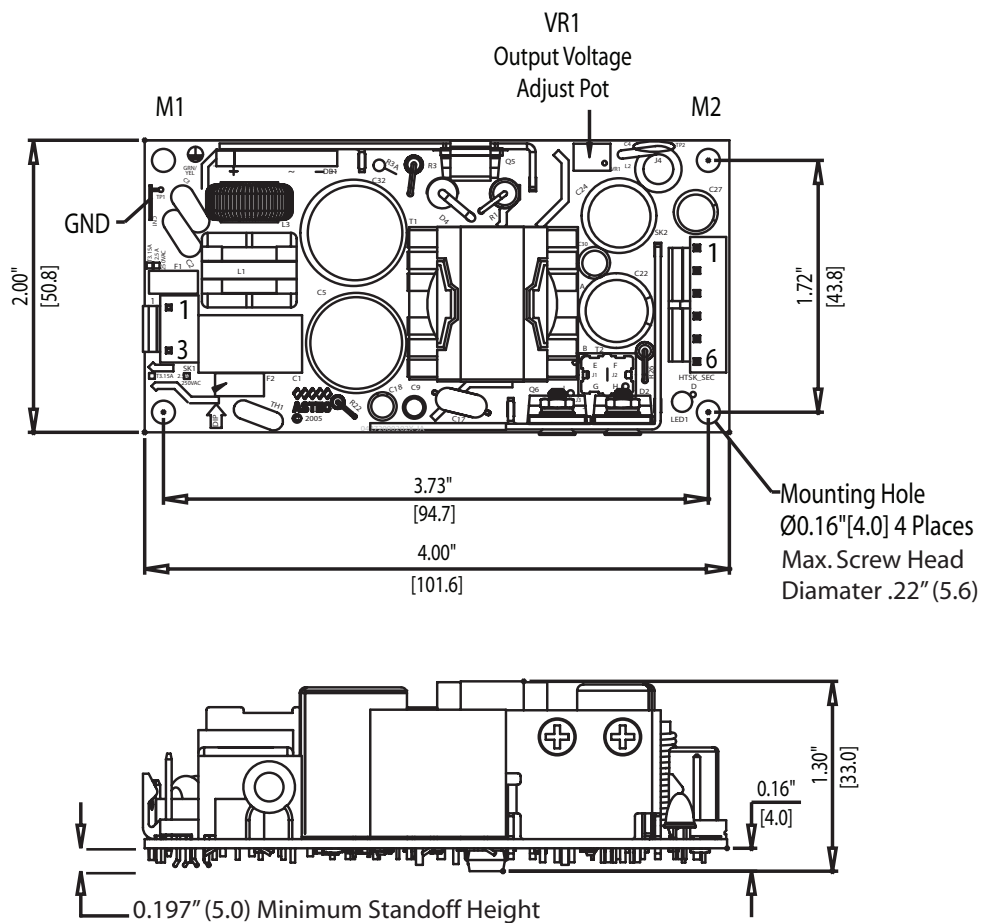
| Input | |
|-------------------------------|---|
| Input range | 90 - 264 Vac (wide range) 127 - 300 Vdc ¹ |
| Frequency | 47 - 63 / 440 Hz (Safety rating 50/60 Hz) |
| Inrush current | <60 A peak @ 230 Vac, cold start @ 25 °C |
| Input power | <74 Watts |
| Efficiency | 80 - 85% typical at full load |
| 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 |

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 within 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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