ARTESYN
LPS100-M SERIES

150 Watts

The LPS100-M series of open-frame AC-DC power supplies features ITE and medical safety approvals. The series offers a choice of six single output models, with voltages of 5 V, 12 V, 15 V, 48 V or 54 Vdc. Each model also provides an isolated 12 V fan output. The main output of the 54 V model features POE (Power over Ethernet) isolation. LPS100-M series power supplies have a typical full load power conversion efficiency of 88% and with a height of only 1.29 inches offer a power density in excess of 14 watts per cubic inch. The series is primarily designed for use in information technology equipment (ITE) and light industrial systems, as well as for equipment intended for non-patient contact and non-patient critical use in low power medical, dental and laboratory applications.

DATA SHEET

Total Power:

80 - 150 Watts

Input Voltage:

90 - 264 Vac
120 - 300 Vdc

# of Outputs:

Single

SPECIAL FEATURES

- Medical and ITE safety approvals, 2X MOPP
- Active power factor correction
- 2” x 4” footprint
- Less than 1U high
- EN61000-3-2 compliant
- Remote sense
- Power fail
- Adjustable main output
- Built-in Class B EMI filter
- Overvoltage protection
- Overload protection
- Thermal overload protection
- Isolated 12 V fan output
- LPX100 Enclosure kit available
- POE isolation on main output of LPS109-M

SAFETY

TUV	62368, 60601-1
UL	60950, 60601-1
cULus	60950, 60601-1
CB	Certificate & report
CE	Mark (LVD)
CQC	Mark

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ELECTRICAL SPECIFICATIONS

Input	
Input range	90 - 264 Vac; 120 - 300 Vdc
Frequency	47 - 63 Hz
Inrush current	50 A max., cold start @ 25 °C
Efficiency	88% 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	100 W for convection (80 W for LPS102-M); 150 W with 30 CFM forced air (120 W for LPS102-M)
Adjustment range	± 10% minimum on the main outputs
Fan output	12 V @ 1 A isolated, ± 10%
Hold-up time	10 ms @ 150 W load, 120 Vac input
Overload protection	Short circuit protection on all outputs. Case overload protected @ 110-160% above rating
Overvoltage protection	15-35% above nominal output
Logical Control	
Power failure	Open collector logic signal goes high 100-500 msec after main output; it goes low at least 6 msec before loss of regulation
Remote sense	Compensates for 0.5 V lead drop min. Will operate without remote sense connected. Reverse connection protected.

ENVIRONMENTAL SPECIFICATIONS

Operating temperature	0° to 50 °C ambient derate each output as 2.5% per degree from 50° to 70 °C. (-20 °C startup[5])
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	IEC 60068-2-6 to the levels of IEC721-3-2
MTBF calculated	534,000 hours at full load and 25 °C ambient conditions, 230 V input, Bellcore

ORDERING INFORMATION

Model Number	Output Voltage	Minimum Load	Maximum Load with Convection Cooling	Maximum Load with 30CFM Forced Air	Peak Load	Regulation[2]	Ripple P/P (PARD)[3]
LPS102-M	5 V	0 A	16 A	24 A	30 A	± 2%	50 mV
LPS103-M	12 V	0 A	8.3 A	12.5 A	14 A	± 2%	120 mV
LPS104-M	15 V	0 A	6.7 A	10 A	11 A	± 2%	150 mV
LPS105-M	24 V	0 A	4.2A	6.3 A	7 A	± 2%	240 mV
LPS108-M	48 V	0 A	2.1 A	3.1 A	3.5 A	± 2%	480 mV
LPS109-M	54 V	0 A	1.85 A	2.8 A	3.1 A	± 2%	540 mV

1. Peak current lasting < 30 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.
5. At 115 Vac input.

PIN ASSIGNMENTS

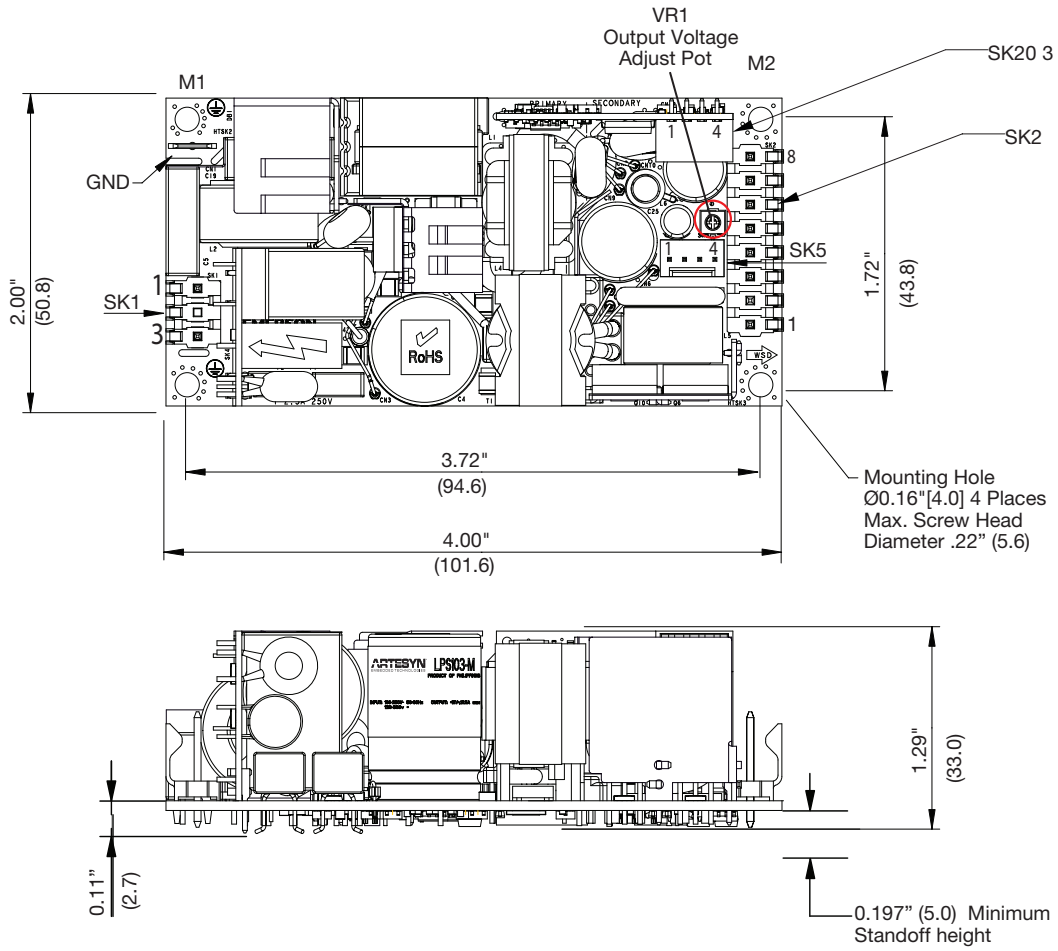
Connector	LPS100-M	
SK1	Pin 1	Neutral
	Pin 3	Line
SK2	Pin 1	Common
	Pin 2	Common
	Pin 3	Common
	Pin 4	Common
	Pin 5	+Vout
	Pin 6	+Vout
	Pin 7	+Vout
	Pin 8	+Vout
SK203	Pin 1	Common
	Pin 2	Power Fail
	Pin 3	- Remote Sense
	Pin 4	+ Remote Sense
SK5	Pin 1	+12 V Fan
	Pin 2	+12 V Fan
	Pin 3	Fan Return (Isolated)
	Pin 4	Fan Return (Isolated)

MATING CONNECTORS

AC Input (SK1)	Molex P/N: 09-50-3031, Pins: 08-52-0072 or Landwin P/N: 3060S0302, Pins: 3360T011P
AC Ground	Molex: 01-90020001
DC Output (SK2)	Molex P/N: 09-50-3081, Pins: 08-52-0072 or Landwin P/N: 3060S0802, Pins: 3360T011P
Remote Sense (SK203)	Molex P/N: 35155-0400, Pins: 08-70-0056 or Landwin P/N: 2640S04A0, Pins: 2543T011P
Fan: (SK5)	Molex P/N: 22-01-1042, Pins: 08-70-0049 or Landwin: P/N: 2510S04A0, Pins: 2543T011P
Artesyn Embedded Power Connector Kit #70-841-025, includes all of the above	

Notes:
1. Specifications subject to change without notice.
2. All dimensions in inches (mm), tolerance is ±.02".
3. Mounting holes M1, M2 should be grounded for EMI purpose
4. Mounting M1 is safety ground connection
5. Specifications are for convection rating at factory settings at 115 Vac input 25 °C unless otherwise stated.
6. This power supply requires mounting on metal standoffs 0.20" (5 m) in height.
7. For DC input an external DC safety rated fuse must be used.
8. Warranty: 2 years
9. Weight: 0.44 lb. / 0.20 kg

MECHANICAL DRAWING



ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than three decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

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ENG-LPS100-M-235-01 11.23