

# ARTESYN LPT100-M SERIES

130 Watts



Advanced Energy's Artesyn LPT100-M series of triple output open-frame AC-DC power supplies features ITE and medical safety approvals. There is a choice of four models, covering output voltages from 3.3 V to 24 V. The power supplies have a typical full load power conversion efficiency of 82% and with a height of only 1.28 inches offer a power density in excess of 12 watts per cubic inch. LPT100-M power supplies are 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:**

130 Watts

#### **Input Voltage:**

90 - 264 Vac

#### # of Outputs:

**Triple** 

#### **SPECIAL FEATURES**

- Medical and ITE safeties
- 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
- LPX100 enclosure kit available
- RoHS compliant

#### **SAFETY**

■ TUV	62368, 60601-1
■ UL	62368, 60601-1
CSA	62368, 60601-1
■ NEMKO	62368, 60601-1
<ul><li>AUSTEL</li></ul>	62368, 60601-1
■ CB	Certificate & report

### **ELECTRICAL SPECIFICATIONS**

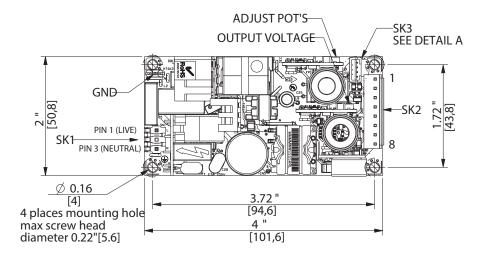
Input			
Input range	90 - 264 Vac; 127 - 300 Vdc		
Frequency	47 - 63 Hz		
Inrush current	50 A max., cold start @ 25 °C		
Efficiency	82% typical at full load		
EMI/RFI	FCC Class B conducted; CISPR22 Class B conducted; EN55022 Class B conducted; VDE0878PT3 Class B conducted		
Safety ground leakage current	275 μA @ 50/60 Hz, 264 Vac input		
Output			
Maximum power	130 W with 200 LFM forced air		
Adjustment range	All outputs adjustable: -20%, +10%, except for +24V output on LPT104-M which will be -10%, +20% and 3.3 V output on the LPT101-M +10%, -15%		
Hold-up time	10 ms @ 130 W load, 120 Vac input		
Overload protection	Short circuit protection on all outputs. Case overload protected @ 110 - 160% above rating for V1 & V2, 150 - 250% for V3		
Overvoltage protection	15 - 35% above nominal output		
Logical Control			
Power failure	Active LowTTL logic signal goes high 100 - 500 msec after main output; it goes low at least 6 mse before loss of regulation		
Remote sense	Compensates for 0.5 V lead drop min. Will operate without remote sense connected.  Reverse connection protected.		

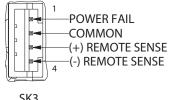
### **ENVIRONMENTAL SPECIFICATIONS**

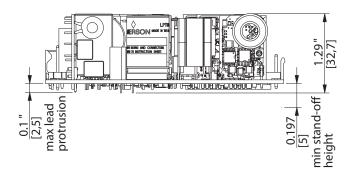
Operating temperature	0 °C to 50 °C ambient derate each output as 2.5% per degree from 50 °C to 70 °C20 °C start up	
Storage temperature	-40 °C to +85 °C	
Electromagnetic susceptibility:	Designed to meet EN61000-4; -2, -3, -4, -5, -6, -8, -11 Level 3	
Humidity	Operating; non-condensing 10% to 90% RH, non-operating, non-condensing 10% - 95%	
Vibration	IEC68-2-6 to the levels of IEC721-3-2	
MTBF calculated	583,000 hours at full load and 25 °C ambient conditions. 230 Vac input, Bellcore	



#### **MECHANICAL DRAWING**









### ORDERING INFORMATION

Model Number	Output Voltage	Minimum Load	Maximum Load with 30CFM Forced Air	Peak Load	Regulation <sup>2</sup>	Ripple P/P (PARD) <sup>3</sup>
	+3.3 V	0 A	18 A	20 A	±2%	50 mV
LPT101-M	+5 V	0 A	9 A	10 A	±5%	50 mV
	+12 V	0 A	2.3 A	2.3 A	±5%	120 mV
	+5 V	0 A	18 A	20 A	±2%	50 mV
LPT102-M	+12 V	0 A	9 A	10 A	±5%	120 mV
	-12 V	0 A	2 A	2 A	±5%	120 mV
	+5 V	0 A	18 A	20 A	±2%	50 mV
LPT103-M	+15 V	0 A	7.2 A	8 A	±5%	150 mV
	-15 V	0 A	1.5 A	2 A	±5%	150 mV
LPT104-M	+5 V	0 A	18 A	20 A	±2%	50 mV
	+24 V	0 A	3 A	3.5 A	±7%	240 mV
	+12 V	0 A	2.3 A	2.3 A	±5%	120 mV

<sup>1.</sup> Peak current lasting  $\!<$  15 seconds with a maximum 10% duty cycle.

<sup>2.</sup> At 25 °C including initial tolerance, line voltage, load currents and output voltages adjusted to factory settings.

 $<sup>3.\</sup> Peak-to-peak\ with\ 20\ mHz\ bandwidth\ and\ 10\ \mu F\ (tantalum\ capacitor)\ in\ parallel\ with\ a\ 0.1\ \mu F\ capacitor\ at\ rated\ line\ voltage\ and\ load\ ranges.$ 

<sup>4.</sup> 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	LPT100-M		
SK1	PIN 1	Live	
	PIN 3	Neutral	
SK2	PIN 1	V1out	
	PIN 2	V1out	
	PIN 3	GND	
	PIN 4	GND	
	PIN 5	GND	
	PIN 6	GND	
	PIN 7	V2out	
	PIN 8	V3out	
SK3	PIN 1	Power Fail	
	PIN 2	GND	
	PIN 3	+ Remote Sense	
	PIN 4	- Remote Sense	

### **MATING CONNECTORS**

AC Input (SK1)	Molex 09-50-3031 PINS: 08-52-0072	
AC Ground	Molex 01-90020001	
DC Output (SK2)	JST VHR-8N PINS: SVH-21T-P1.1	
Remote Sense (SK3)	JST PHR-4; PINS: SPH-002T-PO.5S OR LANDWIN 2001S0400; PINS: 2005T	
Artesyn Embedded Power Connector Kit #70-841-026, includes all of the above		

- Notices.

  1. Specifications subject to change without notice.

  2. All dimensions in inches (mm), tolerance is ±.02".

  3. All mounting holes should be grounded for EMI purpose
- 4. Mounting M1 is safety ground connection
  5. This power supply requires mounting on metal standoffs 0.20" (5 m) in height.
  6. For DC input an external DC safety rated fuse must be used.

- 7. Warranty: 2 year 8. Weight: 0.44 lb. / 0.20 kg





#### **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.

### PRECISION | POWER | PERFORMANCE

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