

ARTESYN LPT40-M SERIES

40 Watts



Advanced Energy's Artesyn LPT40-M series of open-frame AC-DC power supplies comprises two triple output models, covering standard voltages from -15 V to 15 V. Both feature medical safety approvals, with a very low safety ground leakage current of less than 75 μ A. Each model accepts a universal input of 85—264 Vac or 120—300 Vdc. These compact switch-mode power supplies feature main output overvoltage protection and remote sense, with short-circuit protection on all outputs. They provide 40 watts of output power with free air convection cooling and 55 watts with 30 CFM of forced air. Less than 1U high, LPT40-M power supplies are designed for medical, test and measurement, single-board computers, telecommunications and networking applications.

SPECIAL FEATURES

- Universal input
- 3" x 5" footprint
- Less than 1U high
- Remote sense on main output
- Built-in EMI filter
- Low output ripple
- Adjustable 5 V output
- Overvoltage protection
- Overload protection
- 110 KHz switching frequency
- LPX40 enclosure kit available

SAFETY

- VDE 0750/EN60601-1 (IEC601) 113769
- UL UL2601 E182560
- CSA CSA 22.2 No.601.1 LR109492
- CE Mark (LVD)

Data Sheet

Total Power:

40 - 55 Watts

Input Voltage:

85 - 264 Vac
120 - 300 Vdc

of Outputs:

Triple

ELECTRICAL SPECIFICATIONS

Input	
Input range	85 - 264 Vac; 120 - 300 Vdc
Frequency	47 - 440 Hz
Inrush current	< 18 A peak @ 115 Vac; < 36 A peak @ 230 Vac, cold start @ 25 °C
Input current	1 A max. (RMS) @ 115 Vac
Efficiency	70% typical at full load (60% for LPT41)
EMI	FCC Class A conducted; CISPR 22 Class A conducted EN55022 Class A conducted; VDE 0878 PT3 Class A conducted
Safety ground leakage current	< 75 μ A @ 50/60 Hz, 264 Vac input
Output	
Maximum power	40 W for convection; 55 W with 30CFW forced air
Cross regulation	\pm 2% on output 1; \pm 5% on outputs 2, 3
Adjustment range	-5, +10% minimum
Hold-up time	20 ms @ 40 W load, 115 Vac nominal line
Overload protection	Short circuit protection on all outputs. Case overload protected @ 110% to 145% above peak rating
Overvoltage protection	5.7 to 6.7 Vdc on the main output LPT41: 3.6 to 4.6 Vdc
Remote sense	Compensates for 0.5 V lead drop min. Will operate without remote sense connected. Reverse connection protected.

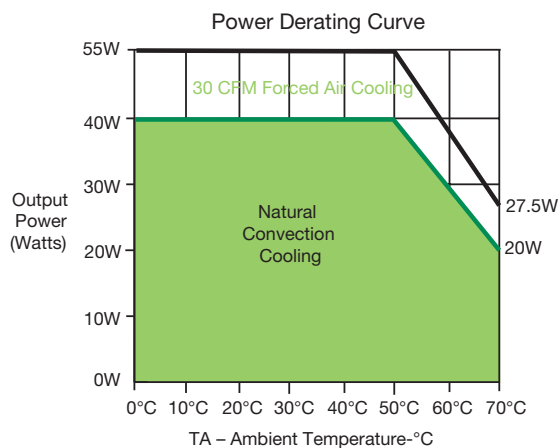
ENVIRONMENTAL SPECIFICATIONS

Operating temperature	0 °C to 50 °C ambient derate each output at 2.5% per degree from 50 °C to 70 °C, -20 °C start up.
Electromagnetic susceptibility	Designed to meet IEC 801, -2, -3, -4, -5, -6, Level 3
Humidity	Operating; non-condensing 5% to 95%
Vibration	Three orthogonal axes, sweep at 1 oct/min, 5 min. dwell at four major resonances 0.75 G peak 5 Hz to 500 Hz, operational
Storage temperature	-40 °C to 85 °C
Temperature coefficient	\pm 0.4% per °C
MTBF demonstrated	> 550,000 hours at full load and 25 °C ambient conditions

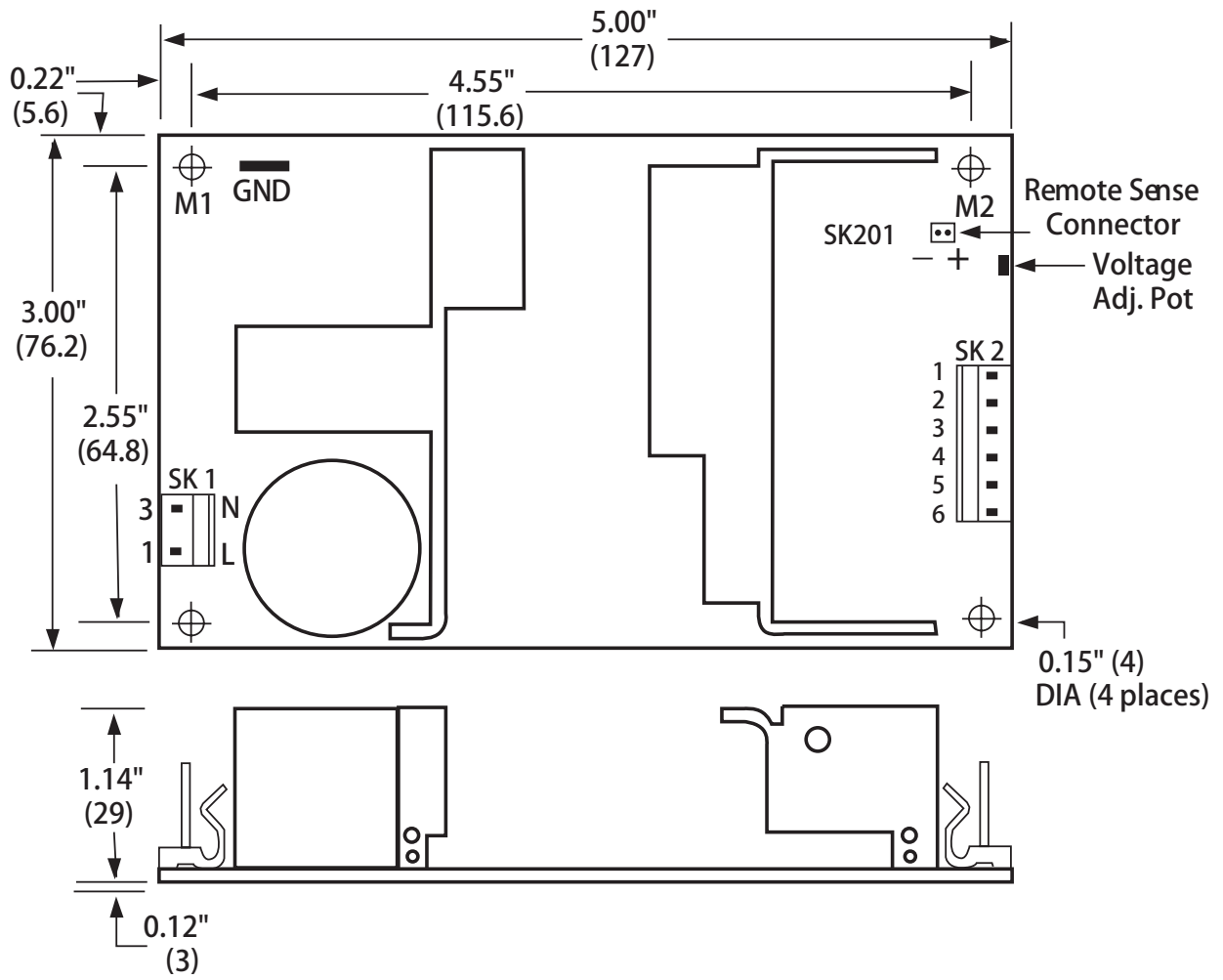
ORDERING INFORMATION

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
LPT42-M	+5 V	0.4 A	4 A	5 A	7 A	±2%	50 mV
	+12 V	0.2 A	2 A	2.5 A	4 A	±5%	120 mV
	-12 V	0 A	0.5 A	0.7 A	1 A	±5%	120 mV
LPT45-M	+5 V	0.4 A	4 A	5 A	7 A	±2%	50 mV
	+15 V	0.2 A	2 A	2.5 A	3 A	±5%	150 mV
	-15 V	0 A	0.5 A	0.7 A	1 A	±5%	150 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 in parallel with a 0.1 μF capacitor at rated line voltage and load ranges.
4. Minimum Loads are required.



MECHANICAL DRAWING



PIN ASSIGNMENTS

Connector	LPT42-M	LPT45-M
SK1-1	Line	Line
SK1-3	Neutral	Neutral
SK2-1	+12 V	+15 V
SK2-2	+5 V	+5 V
SK2-3	+5 V	+5 V
SK2-4	Common	Common
SK2-5	Common	Common
SK2-6	-12 V	-15 V
SK201-1	+Sense	+Sense
SK201-2	-Sense	-Sense

MATING CONNECTORS

AC Input	Molex 09-50-8031 (USA) 09-91-0300 (UK) PINS: 08-52-0111
DC Outputs	Molex 09-50-8061 (USA) 09-91-0600 (UK) PINS: 08-58-0111
Remote Sense	Molex 22-01-2025 PINS: 08-52-0114
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: 1 year
7. Weight: 0.5 lbs/0.23 kg



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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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