ARTESYN LPS60 SERIES

60 W

Advanced Energy's Artesyn LPS60 series of open-frame AC-DC power supplies comprises six single output models, offering voltages of 3.3 V, 5 V, 12 V, 15 V, 24 V or 48 V. Each model accepts a universal input of 85 to 264 VAC or 120 to 300 VDC. These compact switch-mode power supplies feature output overvoltage and short-circuit protection, as well as remote sense. LPS60 series power supplies provide 60 watts of output power with free air convection cooling and 80 W with 30 CFM of forced air. They are suitable for a wide variety of applications, including test and measurement, single-board computers, telecommunications and networking.

SPECIAL FEATURES

- Universal input
- 3" x 5" footprint
- Remote sense
- Built in EMI filter
- Low output ripple
- Adjustable output voltage
- Overload protection
- 110 KHz switching frequency
- RoHS compliant
- LPX60 enclosure kit available

SAFETY

UL+CUL	UL 62368-1
NEMKO	EN 62368-1
CB	IEC 62326-1
CE	Mark (LVD)
UKCA	Mark)

AT A GLANCE

Total Power:

60 to 80 W

Input Voltage:

85 to 264 VAC
127 to 300 VDC

# of Outputs:

Single

RoHS

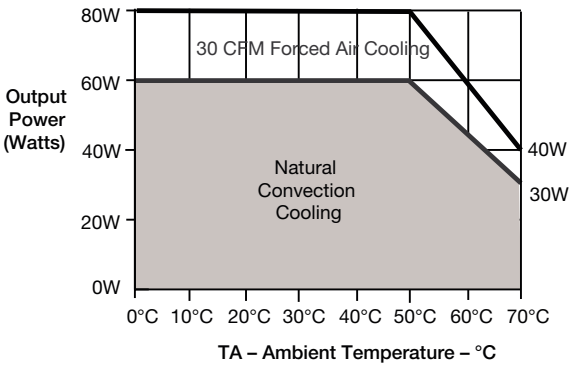
ELECTRICAL SPECIFICATIONS

Input	
Input range	85 to 264 VAC 120 to 300 VDC
Frequency	47 to 440 Hz
Inrush current	<18 A peak @ 115 VAC, < 36 A peak @230 VAC, cold start @ 25 °C
Input current	1.5 A max. (RMS) @ 115 VAC
Efficiency	70% typical at full load
EMI filter	FCC Class B conducted, CISPR 22 Class B conducted, EN55022 Class B conducted VDE0878PT3 Class B conducted
Safety ground leakage current	<0.5 mA @ 50/60 Hz, 264 VAC input
Output	
Maximum power	60 W for convection, 80 W with 30 CFM forced air
Adjustment range	-5, +10% min.
Hold-up time	20 ms @ 60 W load, 115 VAC nominal line
Overload protection	Short circuit protection on all outputs Case overload protected @ 110 to 145% of peak rating
Overvoltage protection	5 V output; 5.7 to 6.7 VDC Other outputs 110% to 125% of nominal output
Remote sense	Compensates for 0.5 V lead drop min. Will operate without remote sense connected. Reverse connection protected

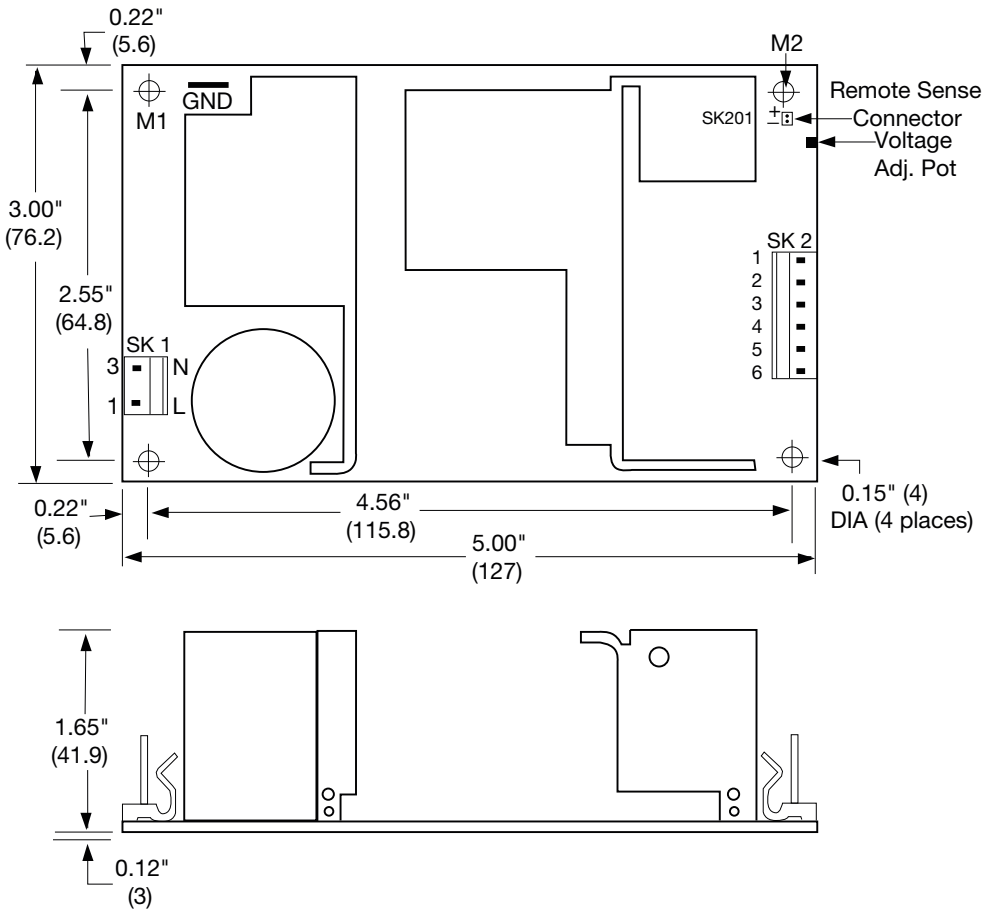
ENVIRONMENTAL SPECIFICATIONS

Operating temperature	0 °C to 50 °C ambient derate each output as 2.5% per degree from 50 °C to 70 °C, -20 °C startup
Storage temperature	-40 °C to +85 °C
Electromagnetic susceptibility	Designed to meet IEC61000-4-2, -4-3, -4-4, -4-5, -4-6, Level 3
Humidity	Operating; non-condensing 5% to 95% RH
Vibration	Three orthogonal axes, sweep at 1 cot/min. 5 min. dwell at four major resonances 0.75 G peak 5 Hz to 500 Hz, operational
Temperature coefficient	±0.04% per °C
MTBF demonstrated	>550,000 hours at full load and 25 °C ambient conditions

Power Derating Curve



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]
LPS61	3.3 V	2 A	12 A	16 A	18 A	±2%	33 mV
LPS62	5 V	0 A	12 A	16 A	18 A	±2%	50 mV
LPS63	12 V	0 A	5 A	6.7 A	7.5 A	±2%	120 mV
LPS64	15 V	0 A	4 A	5.3 A	6 A	±2%	150 mV
LPS65	24 V	0 A	2.5 A	3.3 A	3.8 A	±2%	240 mV
LPS68	48 V	0 A	1.3 A	1.7 A	1.9 A	±2%	480 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.

PIN ASSIGNMENTS

Connector	LPS61	LPS62	LPS63	LPS64	LPS65	LPS68
SK1-1	Line	Line	Line	Line	Line	Line
SK1-3	Neutral	Neutral	Neutral	Neutral	Neutral	Neutral
SK2-1	3.3 V	5 V	+12 V	+15 V	+24 V	48 V
SK2-2	3.3 V	5 V	+12 V	+15 V	+24 V	48 V
SK2-3	3.3 V	5 V	+12 V	+15 V	+24 V	48 V
SK2-4	Common	Common	Common	Common	Common	Common
SK2-5	Common	Common	Common	Common	Common	Common
SK2-6	Common	Common	Common	Common	Common	Common
SK201-1	+Sense	+Sense	+Sense	+Sense	+Sense	+Sense
SK201-2	-Sense	-Sense	-Sense	-Sense	-Sense	-Sense

MATING CONNECTORS

AC Input	Molex 09-50-8031 (USA) Not required for (-T) option 09-91-0300 (UK) PINS: 08-58-0111
DC Outputs	Molex 09-50-8061 (USA) Not required for (-T) option 09-93-0600 (UK) PINS: 08-52-0113
Remote Sense	Molex 22-01-2025 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" (± 0.5mm).
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: 0.75 lbs/0.34 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.

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