

LPS60 Series

60 Watts

Data Sheet

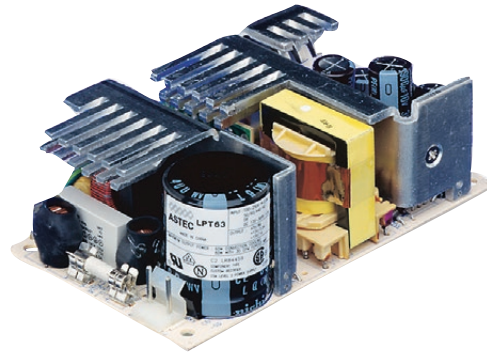
Total Power: 60 - 80 Watts
Input Voltage: 85 - 264 Vac
120 - 300 Vdc
of Outputs: Single

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 UL 60950-1
CAN/CSA-C22.2 60950-1
E132002
- NEMKO EN 60950-1
- CB IEC 60950-1
- CE Mark (LVD)



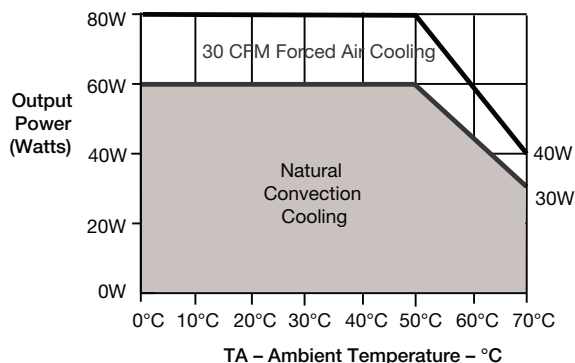
Electrical Specifications

| Input | |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Input range | 85 - 264 Vac (wide range) 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 | 1.5 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% minimum |
| Hold-up time | 20 ms @ 60 W load, 115 Vac nominal line |
| Overload protection | Short circuit protection on all outputs. Case overload protected @ 110-145% above peak rating |
| Overvoltage protection | 5 V output; 5.7 - 6.7 Vdc. Other outputs 10% to 25% above nominal output |
| Remote sense | Compensates for 0.5 V lead drop min. Will operate without remote sense connected. Reverse connection protected. |

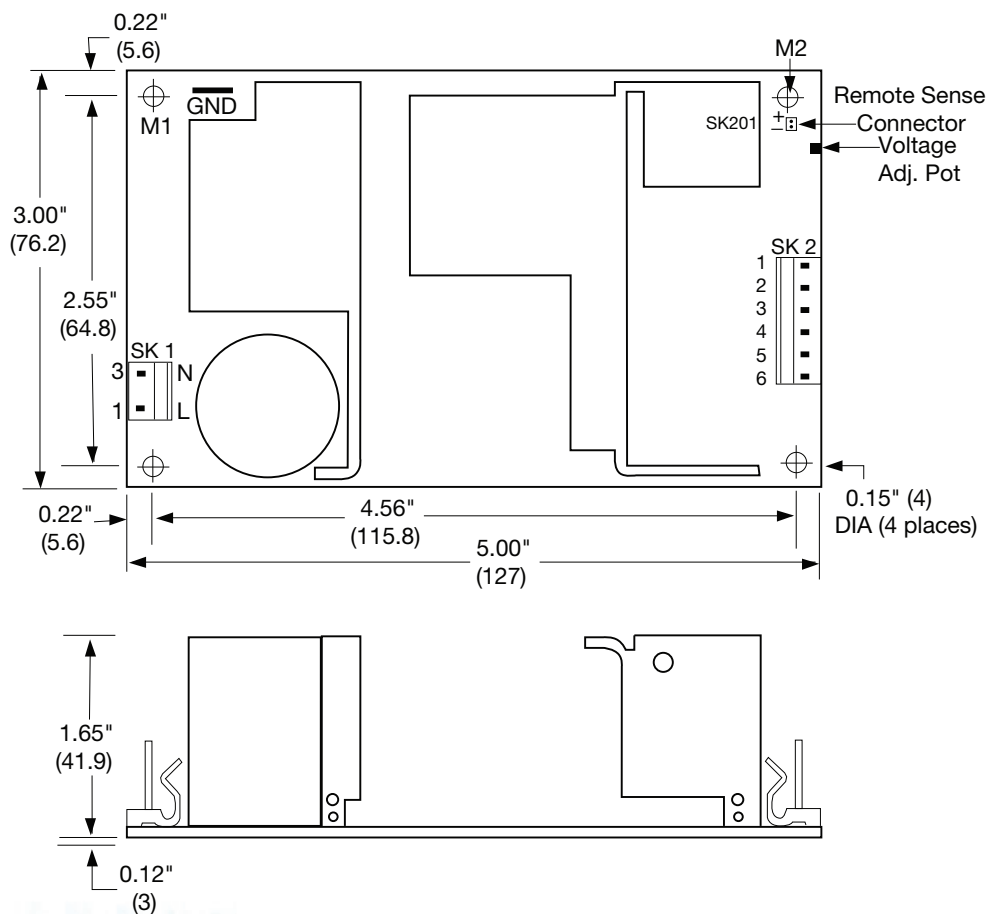
Environmental Specifications

| | |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------|
| Operating temperature | 0° to 50 °C ambient derate each output as 2.5% per degree from 50° 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

WORLDWIDE OFFICES

Americas

2900 S.Diablo Way
Tempe, AZ 85282
USA
+1 888 412 7832

Europe (UK)

Waterfront Business Park
Merry Hill, Dudley
West Midlands, DY5 1LX
United Kingdom
+44 (0) 1384 842 211

Asia (HK)

14/F, Lu Plaza
2 Wing Yip Street
Kwun Tong, Kowloon
Hong Kong
+852 2176 3333

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For support: productsupport.ep@artesyn.com