

## LPS40 Series

40 Watts

**Total Power:** 40 - 55 Watts  
**Input Voltage:** 85 - 264 VAC  
120 - 300 VDC  
**# of Outputs:** Single



## Special Features

- Universal input
- 3" x 5" footprint
- Less than 1U high
- Remote sense
- Terminal block option (-T)
- Built-in EMI filter
- Low output ripple
- Adjustable output
- Overvoltage protection
- Overload protection
- 110 KHz switching frequency
- LPX40 enclosure kit available

## Safety

- **UL** UL60950  
E132002
- **CSA** CSA 22.2-234 Level 3  
LR53982C
- **NEMKO** EN 60950/EMKO-TUE  
P94100375 (74-sec)203
- **CB** Certificate and report  
1119, 1125, 1126, 1127
- **CE Mark** (LVD)

## 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                                                                                               |
| EMI filter:                    | FCC Class B conducted; CISPR 22 Class B conducted;<br>EN55022 Class B conducted; VDE 0878 PT3 class B conducted        |
| Safety ground leakage current: | < 0.5 mA @ 50/60 Hz, 264 VAC input                                                                                     |
| Output                         |                                                                                                                        |
| Maximum power:                 | 40 W for convection; 55 W with 30CFM forced air                                                                        |
| 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<br>Case overload protected @ 110-145% above peak rating                        |
| Overvoltage protection:        | 5 V output; 5.7 to 6.7 VDC. Other outputs 10% to 25% above nominal output                                              |
| Remote sense:                  | Compensates for 0.5 V lead drop minimum<br>Will operate without remote sense connected<br>Reverse connection protected |



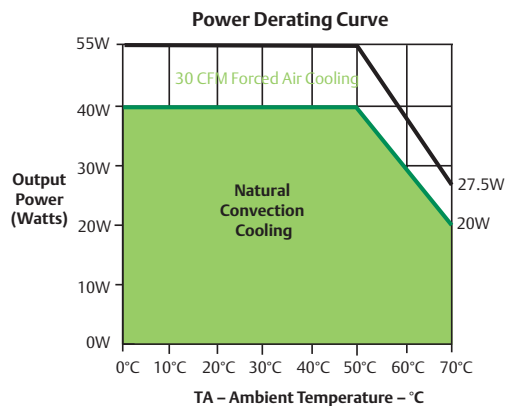
## Environmental Specifications

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

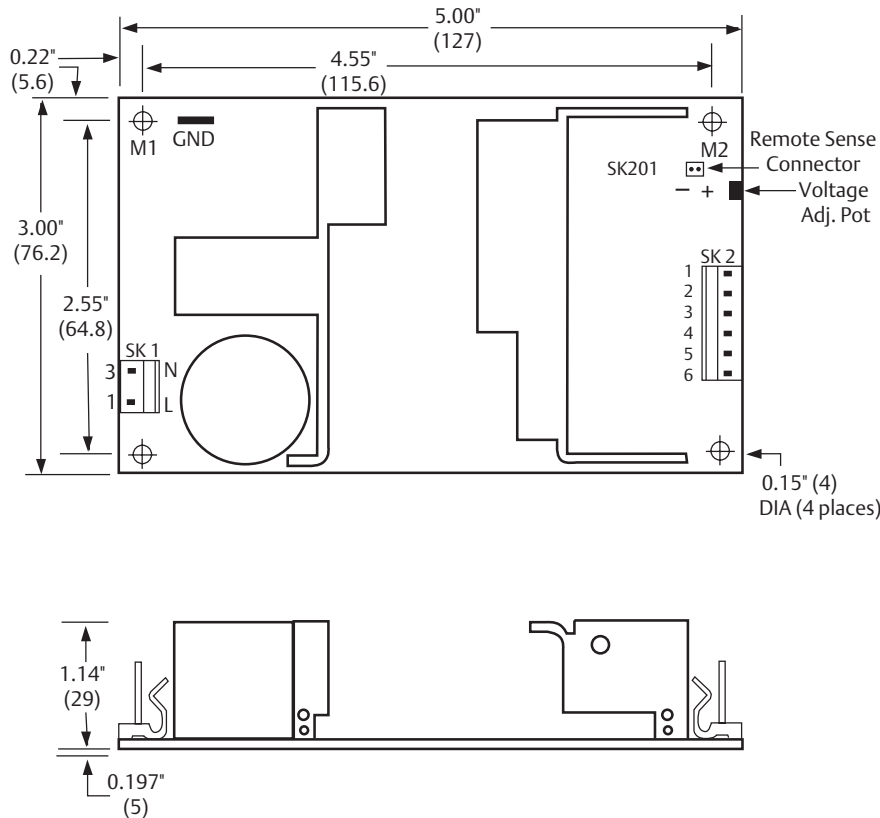
## Ordering Information

| Model Number | Output Voltage | Minimum Load | Maximum Load with Convection Cooling | Maximum Load with 30CFM Forced Air | Peak Load <sup>1</sup> | Regulation <sup>2</sup> | Ripple P/P (PARD) <sup>3</sup> |
|--------------|----------------|--------------|--------------------------------------|------------------------------------|------------------------|-------------------------|--------------------------------|
| LPS41(-T)    | 3.3 V          | 0A           | 8 A                                  | 11 A                               | 12 A                   | ± 2%                    | 50 mV                          |
| LPS42(-T)    | 5 V            | 0A           | 8 A                                  | 11 A                               | 12 A                   | ± 2%                    | 50 mV                          |
| LPS43(-T)    | 12 V           | 0A           | 3.3 A                                | 4.5 A                              | 5 A                    | ± 2%                    | 120 mV                         |
| LPS44(-T)    | 15 V           | 0A           | 2.6 A                                | 3.6 A                              | 4 A                    | ± 2%                    | 150mV                          |
| LPS45(-T)    | 24 V           | 0A           | 1.7 A                                | 2.3 A                              | 2.5 A                  | ± 2%                    | 240mV                          |
| LPS48(-T)    | 48 V           | 0A           | 0.9 A                                | 1.2 A                              | 1.3 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 in parallel with a 0.1 µF capacitor at rated line voltage and load ranges.
4. (-T) indicates Terminal Block option for input and output (instead of Molex type)



## Mechanical Drawing



## Pin Assignments

| Connector | LPS41   | LPS42   | LPS43   | LPS44   | LPS45   | LPS48   |
|-----------|---------|---------|---------|---------|---------|---------|
| SK1-1     | Line    | Line    | Line    | Line    | Line    | Line    |
| SK1-3     | Neutral | Neutral | Neutral | Neutral | Neutral | Neutral |
| SK2-1     | +3.3V   | +5V     | +12V    | +15V    | +24V    | +48V    |
| SK2-2     | +3.3V   | +5V     | +12V    | +15V    | +24V    | +48V    |
| SK2-3     | +3.3V   | +5V     | +12V    | +15V    | +24V    | +48V    |
| 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<br>09-91-0300 (UK)<br>PINS: 08-52-0113 |
| DC Outputs:                                                                | Molex 09-50-8061 (USA) Not required for (-T) option<br>09-91-0600 (UK)<br>PINS: 08-52-0113 |
| Remote Sense:                                                              | Molex 22-01-2025<br>PINS: 08-52-0123                                                       |
| Emerson Network Power Connector Kit #70-841-006, includes all of the above |                                                                                            |

- Specifications subject to change without notice.
- All dimensions in inches (mm), tolerance is  $\pm 0.02$ " ( $\pm 0.5$ mm)
- Mounting holes M1 and M2 should be grounded for EMI purposes.
- Mounting hole M1 is safety ground connection.
- Specifications are for convection rating at factory settings at 115 VAC input, 25°C unless otherwise stated.
- Warranty: 2 year
- Weight: 0.5 lbs/0.23kg

## Americas

5810 Van Allen Way  
Carlsbad, CA 92008  
USA  
Telephone: +1 760 930 4600  
Facsimile: +1 760 930 0698

## Europe (UK)

Waterfront Business Park  
Merry Hill, Dudley  
West Midlands, DY5 1LX  
United Kingdom  
Telephone: +44 (0) 1384 842 211  
Facsimile: +44 (0) 1384 843 355

## Asia (HK)

14/F, Lu Plaza  
2 Wing Yip Street  
Kwun Tong, Kowloon  
Hong Kong  
Telephone: +852 2176 3333  
Facsimile: +852 2176 3888

For global contact, visit:

[www.PowerConversion.com](http://www.PowerConversion.com)  
[techsupport.embeddedpower@emerson.com](mailto:techsupport.embeddedpower@emerson.com)

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