

## LPS25 Series

25 Watts

**Total Power:** 25-40 Watts  
**Input Voltage:** 85-264 VAC  
120-300 VDC  
**# of Outputs:** Single



Rev. 02.05.07  
LPS25 Series  
1 of 3

### 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
- 2 year warranty

### Safety

**VDE** 0805 EN60950  
11774-3336-1241  
(LC#84936)  
**UL** UL60950 E132002  
**CSA** CSA 22.2-234 Level 3  
LR53982C  
**NEMKO** EN 60950/EMKO-TUE  
P95100442 (74-sec) 203  
**CB** Certificate and report  
1577, 1578, 1579, 1580  
**CE Mark** (LVD)

## Electrical Specifications

### Input

Input range	85-264 VAC; 120-300 VDC
Frequency	47-440 Hz
Inrush current	<15A peak @ 115VAC; <30A peak @ 230VAC, cold start @ 25°C
Input current	1A max. (RMS) @ 115VAC
Efficiency	70% typical at full load
EMI filter	FCC Class B conducted; CISPR 22 Class B conducted; EN55022 Class B conducted
Safety ground leakage current	<0.5 mA @ 50/60 Hz, 264 VAC input

### Output

Maximum power	25 W for convection; 40W with 30CFM forced air
Adjustment range	-5, +10% minimum
Hold-up time	20 ms @ 25W load, 115VAC nominal line
Overload protection	Short circuit protection on all outputs Case overload protected @ 110-145% above peak rating
Overvoltage protection	5V output; 5.7 to 6.7VDC. Other outputs 10% to 25% above nominal output
Remote sense	Compensates for 0.5 V lead drop minimum Will operate without remote sense connected Reverse connection protected



## Environmental Specifications

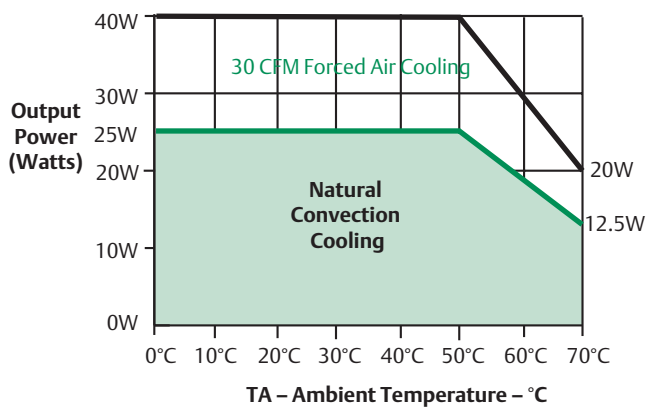
Operating temperature:	0° to 50°C ambient. Derate each output 2.5% per degree from 50° to 70°C, -20°C start up.
Storage temperature:	-40°C to +85°C
Electromagnetic susceptibility:	Designed to meet IEC 801, -2, -3, -4, -5, -6, Level 3
Humidity:	Operating; non-condensing 5% to 95% RH
Vibration:	Three orthogonal 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

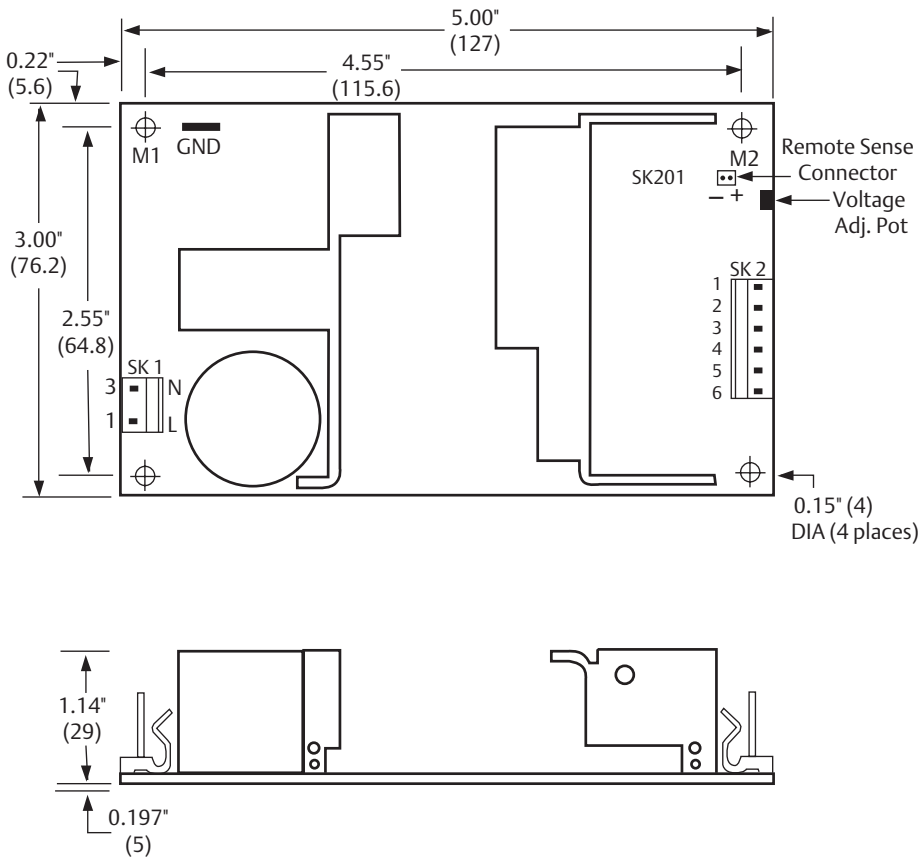
Model Number	Output Voltage	Minimum Load	Maximum Load with Convection Cooling	Maximum Load with 30CFM Forced Air	Peak Load <sup>1</sup>	Regulation <sup>2</sup>	Ripple P/P (PARD) <sup>3</sup>
LPS22(-T)	5V	0A	5A	8A	9A	±2%	50 mV
LPS23(-T)	12V	0A	2.1A	3.3A	3.7A	±2%	120 mV
LPS24(-T)	15V	0A	1.7A	2.7A	3A	±2%	150 mV
LPS25(-T)	24V	0A	1.1A	1.8A	1.9A	±2%	240 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)

**Power Derating Curve**



## Mechanical Drawing



## Astec

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## Pin Assignments

Connector	LPS22	LPS23	LPS24	LPS25
SK1-1	Line	Line	Line	Line
SK1-3	Neutral	Neutral	Neutral	Neutral
SK2-1	+5 V	+12 V	+15V	+24V
SK2-2	+5 V	+12 V	+15V	+24V
SK2-3	+5 V	+12 V	+15V	+24V
SK2-4	Common	Common	Common	Common
SK2-5	Common	Common	Common	Common
SK2-6	Common	Common	Common	Common
SK201-1	+Sense	+Sense	+Sense	+Sense
SK201-2	-Sense	-Sense	-Sense	-Sense

## Mating Connectors

**AC Input:** Molex 09-50-8031 (USA) **Not required for (-T) option**  
09-91-0300 (UK)  
PINS: 08-52-0113

**DC Outputs:** Molex 09-50-8061 (USA) **Not required for (-T) option**  
09-91-0600 (UK)  
PINS: 08-52-0113

**Remote Sense:** Molex 22-01-2025  
PINS: 08-52-0123

Astec 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: 0.5lbs/0.23kg

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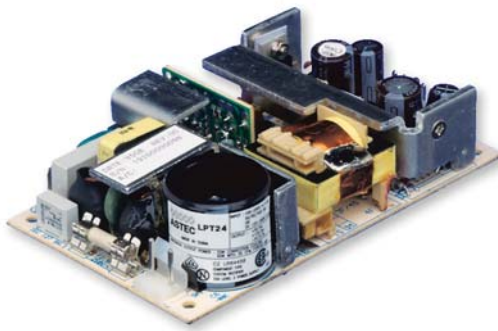
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## LPT25 Series

25 Watts

**Total Power:** 25 - 40 Watts  
**Input Voltage:** 85 - 264 VAC  
120 - 300VDC  
**# of Outputs:** Triple



### Special Features

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

### Safety

**VDE** 0805 EN60950  
11774-3336-1241  
(LC#84936)

**UL** UL60950  
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**CSA** CSA 22.2-234 Level 3  
LR53982C

**NEMKO** EN 60950/EMKO-TUE  
P95100411  
(74-sec) 203

**CB** Certificate and report  
1569, 1570, 1571, 1572

**CE** Mark (LVD)

## Electrical Specifications

### Input

Input range	85-264 VAC 120-300 VDC
Frequency	47-440 Hz
Inrush current	<15A peak @ 115VAC; <30A peak @ 230VAC, cold start @ 25°C
Input current	1 A max. (RMS) @ 115 VAC
Efficiency	70% typical at full load
EMI	FCC Class B conducted; CISPR 22 Class B conducted 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	25W for convection; 40W with 30CFW forced air
Cross regulation	±2% on output 1; ±5% on outputs 2, 3
Adjustment range	-5, +10% minimum
Hold-up time	20 ms @ 25 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
Remote sense	Compensates for 0.5 V lead drop min. Will operate without remote sense connected. Reverse connection protected.



## Environmental Specifications

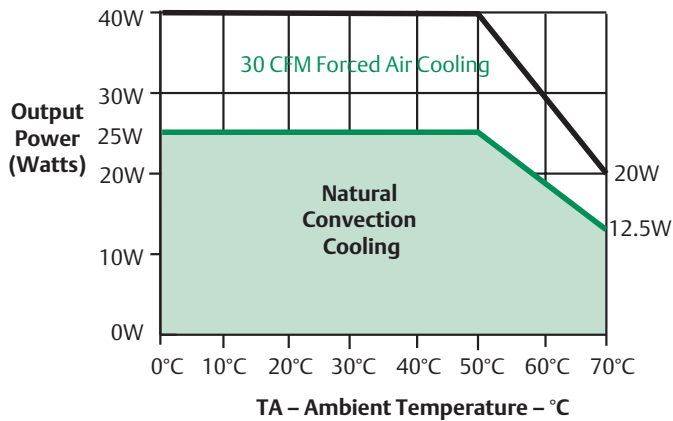
Operating temperature:	0° to 50°C ambient derate each output at 2.5% per degree from 50° to 70°C, -20°C start up.
Electromagnetic susceptibility:	Designed to meet IEC 801, -2, -3, -4, -5, -6, Level 3
Humidity:	Operating; non-condensing 5% to 95%
Vibration:	Three orthogonal axes, sweep at 1 oct/min, 5 min. dwell at four major resonances 0.75G peak 5 Hz to 500 Hz, operational
Storage temperature:	-40° to 85°C
Temperature coefficient:	±.04% per °C
MTBF demonstrated:	>550,000 hours at full load and 25°C ambient conditions

## Ordering Information

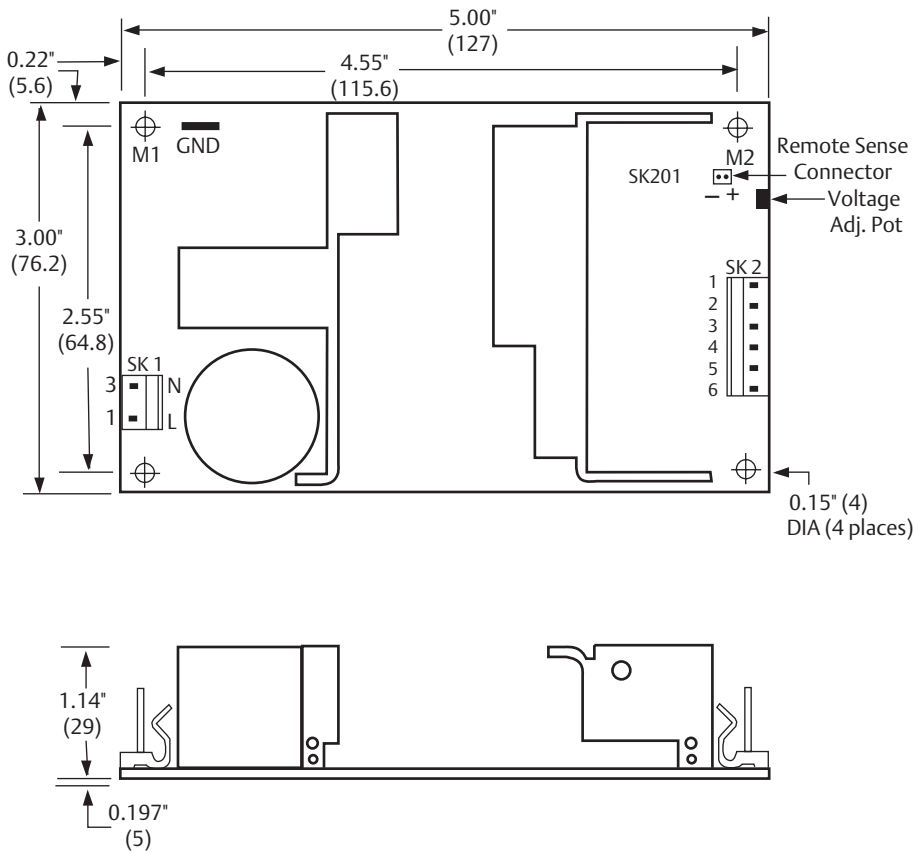
Model Number	Output Voltage	Minimum Load	Maximum Load with Convection cooling	Maximum Load with 30CFM Forced Air	Peak Load <sup>1</sup>	Regulation <sup>2</sup>	Ripple P/P (PAR) <sup>3</sup>
LPT22(-T)	5V	0.3A	3A	4A	5A	±2%	50mV
	12V	0.1A	1.5A	2A	3A	±5%	120mV
	-12V	0A	0.5A	0.7A	1A	±5%	120mV
LPT23(-T)	5V	0.4A	4A	5A	6A	±2%	50mV
	12V	0A	0.5A	0.7A	1A	±5%	120mV
	-12V	0A	0.5A	0.7A	1A	±5%	120mV
LPT24(-T)	5V	0.3A	3A	4A	5A	±2%	50mV
	12V	0.1A	1.5A	2A	3A	±5%	120mV
	-5V	0A	0.5A	0.7A	1A	±5%	50mV
LPT25(-T)	5V	0.3A	3A	4A	5A	±2%	50mV
	15V	0.1A	1.5A	2A	2A	±5%	150mV
	-15V	0A	0.5A	0.7A	1A	±5%	150mV

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.
5. (-T) indicates Terminal Block option for input and output (instead of Molex type).

### Power Derating Curve



## Mechanical Drawing



## Pin Assignments

Connector	LPT22	LPT23	LPT24	LPT25
SK1-1	Line	Line	Line	Line
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SK2-1	+12V	+12V	+12V	+15V
SK2-2	+5V	+5V	+5V	+5V
SK2-3	+5V	+5V	+5V	+5V
SK2-4	Common	Common	Common	Common
SK2-5	Common	Common	Common	Common
SK2-6	-12V	-12V	-5V	-15V
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- Warranty: 2 year
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