

## LPS120 Series

120 Watts

**Total Power:** 80 - 130 Watts  
**Input Voltage:** 85 - 264 VAC  
**# of Outputs:** Single



### Special Features

- Active power factor correction
- 3" x 5" footprint
- Less than 1U high
- EN61000-3-2 compliant
- Remote sense
- Power fail and remote inhibit
- Single wire current sharing
- Adjustable main output
- Built-in Class B EMI filter
- Overvoltage protection
- Overload protection
- Thermal overload protection
- 5 V Standby output and 12V Fan output

### Safety

**TUV:** 60950  
**UL:** 60950  
**CSA:** 60950  
**NEMKO:** 60950  
**AUSTEL:** 60950  
**CB:** Certificate and report  
**CE:** Mark (LVD)

## Electrical Specifications

### Input

**Input range:** 85 - 264 VAC ; 127 - 300VDC  
**Frequency:** 47-440 Hz  
**Inrush current:** 40A max., cold start @ 25°C  
**Efficiency:** 80% typical at full load  
**EMI/RFI:** FCC Class B conducted; CISPR22 Class B conducted; EN55022 Class B conducted; VDE0878PT3 Class B conducted  
**Power factor:** 0.99 typical  
**Safety ground leakage current:** 0.5mA @ 50/60 Hz, 264 VAC input

### Output

**Maximum power:** 80W for convection ; 130W with 30CFM forced air  
**Adjustment range:** ±5% minimum on the main outputs  
**Fan output:** 12V @ 500mA - 5%, +7%  
**Standby outputs:** 5V @ 500mA ±5%  
**Hold-up time:** 20ms @ 125W load, 120VAC input  
**Overload protection:** Short circuit protection on all outputs. Case overload protected @ 120-135% above rating  
**Overvoltage protection:** 20-35% above nominal output  
**Remote sense:** Compensates for 0.5 V lead drop max. Will operate without remote sense connected. Reverse connection protected.

### Logical Control

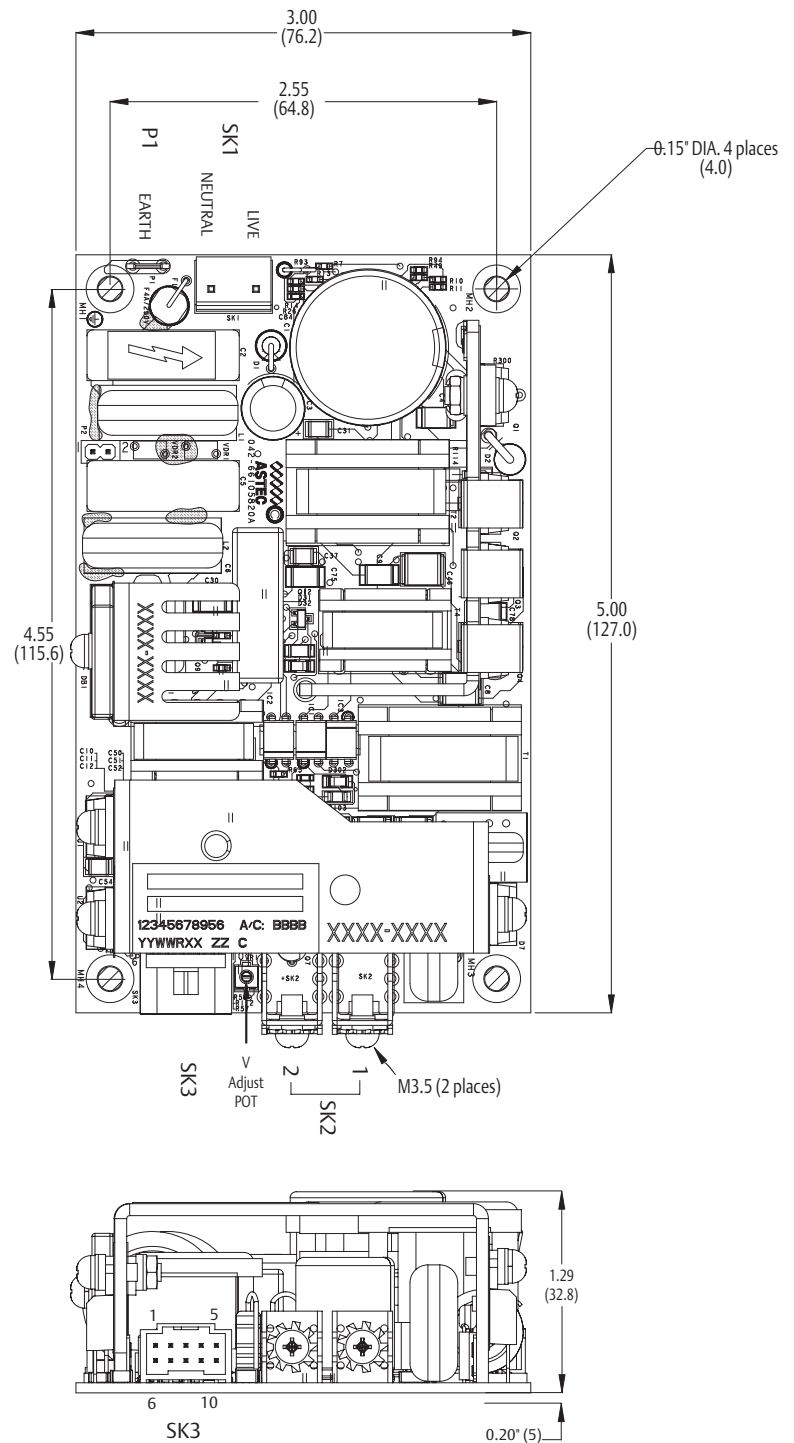
**Power failure:** TTL logic signal goes high 100-500 msec after main output; it goes low at least 4 msec before loss of regulation  
**Remote inhibit:** Requires a contact closure to disable the outputs, except 5V standby.  
**Remote sense:** Compensates for 0.5 V lead drop min. Will operate without 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 start up
Storage temperature:	-40°C to +85°C
Electromagnetic susceptibility:	designed to meet EN61000-4; -2, -3, -4, -5, -6, -8, -11 Level 3
Humidity:	Operating; non-condensing 10% to 95% RH
Vibration:	IEC68-2-6 to the levels of IEC721-3-2
MTBF demonstrated	>550,000 hours at full load and 25°C ambient conditions

## Mechanical Drawing



## Ordering Information

Model Number	Output Voltage	Minimum Load	Maximum Load with Convection Cooling	Maximum Load with 30CFM Forced Air	Peak Load	Regulation <sup>2</sup>	Ripple P/P (PARD) <sup>3</sup>
LPS121	3.3V	0A	21A	36A	29A	±2%	50mV
LPS122	5V	0A	16A	26A	29A	±2%	50mV
LPS123	12V	0A	6.7A	10.8A	12.8A	±2%	120mV
LPS124	15V	0A	5.3A	8.7A	10.0A	±2%	150mV
LPS125	24V	0A	3.4A	5.4A	6.3A	±2%	240mV
LPS128	48V	0A	1.7A	2.7A	3.2A	±2%	480mV

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. When in parallel a 10% load is required for each power supply.

## Pin Assignments

### Connector LPS120

SK1	Pin1	Neutral
	Pin3	Line
SK2	TB-1	COMMON
	TB-2	Main output
SK3	Pin1	+V1 Remote sense
	Pin2	-V1 Remote sense
	Pin3	+Remote inhibit
	Pin4	-Remote inhibit
	Pin5	+Power fail
	Pin6	Common
	Pin7	SWP
	Pin8	+12V
	Pin9	12V common
	Pin10	+5V standby

### Mating Connectors

(SK1)AC Input: Molex 09-50-8031 (connector) 08-52-0113 (pins)

(SK2)DC Output: Molex series 19141-0058/0063 Spade lug

(SK3) Control Signals:  
Molex 90142-0010 (USA)  
PINS: 90119-2110 or  
Amp: 87977-3  
PINS: 87309-8

Astec Connector Kit # 70-841-020, includes all of the above.

### Notes:

1. Specifications subject to change without notice.
2. All dimensions in inches (mm), tolerance is ±.02".
3. mounting holes MH1, MH2, MH3 should be grounded for EMI purpose
4. Mounting MH1 is safety ground connection
5. Specifications are for convection rating at factory settings at 115 VAC input 25 C deg unless otherwise stated.
6. This power supply requires mounting on metal standoffs 0.20" (5m) in height.
7. Warranty: 2 year
8. Weight: 0.71 lb. / 0.32 kg

## 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)

While every precaution has been taken to ensure accuracy and completeness in this literature, Emerson Network Power assumes no responsibility, and disclaims all liability for damages resulting from use of this information or for any errors or omissions.

## Emerson Network Power.

The global leader in enabling  
business-critical continuity.

- AC Power
- Connectivity
- DC Power
- Embedded Computing
- **Embedded Power**
- Monitoring
- Outside Plant
- Power Switching & Controls
- Precision Cooling
- Racks & Integrated Cabinets
- Services
- Surge Protection

## EmersonNetworkPower.com

Emerson Network Power and the Emerson Network Power logo are trademarks and service marks of Emerson Electric Co. ©2008 Emerson Electric Co.