

## 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

### Electrical Specifications

Input	
Input range:	85 - 264 VAC ; 127 - 300VDC
Frequency:	47 - 440 Hz
Inrush current:	40 A 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:	0.5 mA @ 50/60 Hz, 264 VAC input
Output	
Maximum power:	80 W for convection ; 130 W with 30CFM forced air
Adjustment range:	± 5% minimum on the main outputs
Fan output:	12 V @ 500mA - 5%, +7%
Standby outputs:	5V @ 500mA ± 5%
Hold-up time:	20ms @ 125 W load, 120 VAC 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 5 V standby.
Remote sense:	Compensates for 0.5 V lead drop min. Will operate without remote sense connected. Reverse connection protected.

### Safety

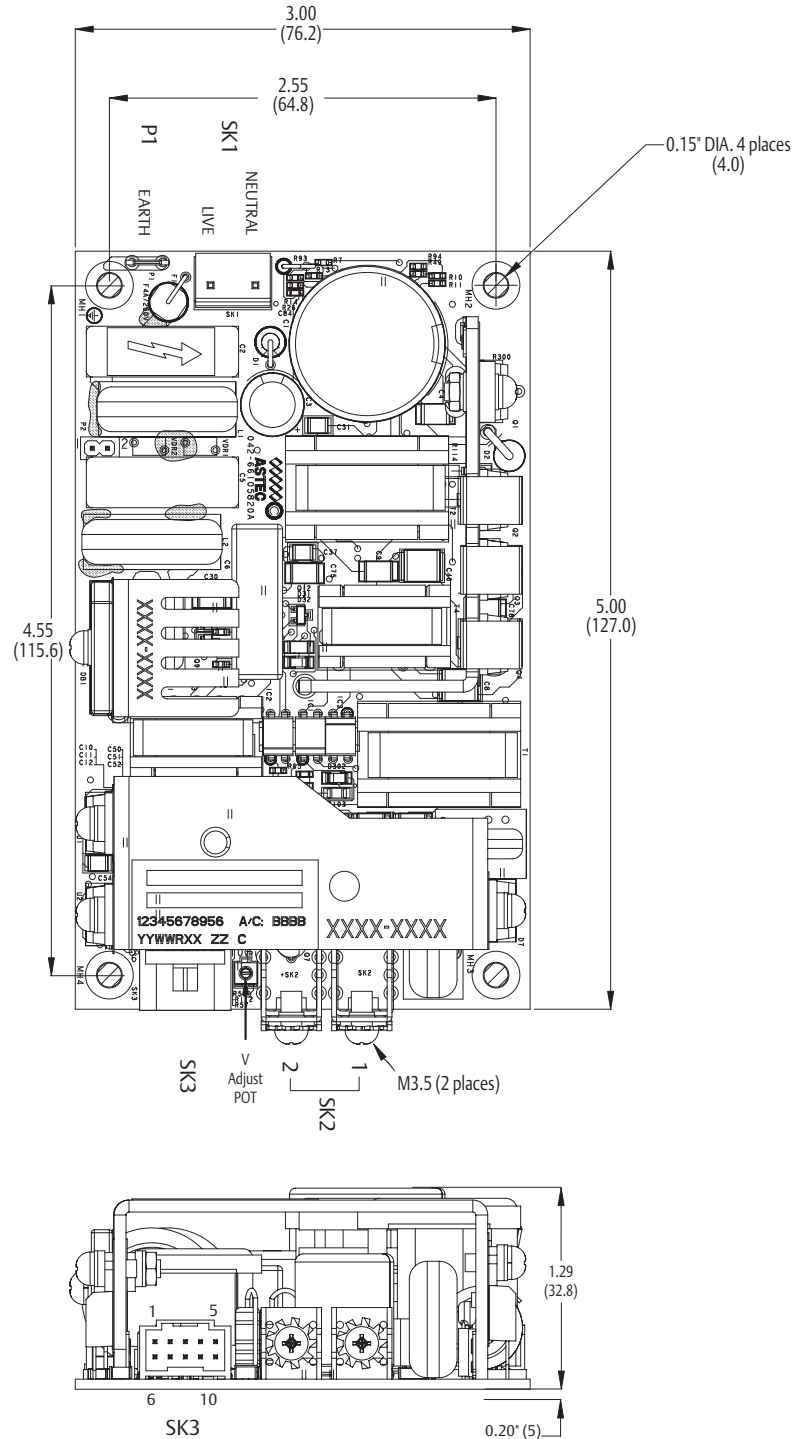
**TUV:** 60950  
**UL:** 60950  
**CSA:** 60950  
**NEMKO:** 60950  
**AUSTEL:** 60950  
**CB:** Certificate and report  
**CE:** Mark (LVD)



## 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	3.3 V	0 A	21 A	36 A	29 A	± 2%	50 mV
LPS122	5 V	0 A	16 A	26 A	29 A	± 2%	50 mV
LPS123	12 V	0 A	6.7 A	10.8 A	12.8 A	± 2%	120 mV
LPS124	15 V	0 A	5.3 A	8.7 A	10.0 A	± 2%	150 mV
LPS125	24 V	0 A	3.4 A	5.4 A	6.3 A	± 2%	240 mV
LPS128	48 V	0 A	1.7A	2.7 A	3.2 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. When in parallel a 10% load is required for each power supply.

## Pin Assignments

### Connector LPS120

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

Emerson Network Power 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 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. ©2009 Emerson Electric Co.