Embedded Power for Business-Critical Continuity

> Rev. 08.04.09\_101 LPS170 Series 1 of 3

# LPS170 Series 175 Watts

Total Power: Input Voltage:

**# of Outputs:** 

100 - 175 Watts 85-264 VAC 120-300 VDC Single





# **Electrical Specifications**

Input			
Input range:	85-264 VAC; 120-300 VDC		
Frequency:	47-63 Hz		
Inrush current:	38 A max, cold start @ 25°C		
Efficiency:	75% typical at full load		
EMI filter:	FCC Class B conducted CISPR 22 Class B conducted EN55022 Class B conducted VDE 0878 PT3 Class B conducted		
Power Factor:	0.99 typical		
Safety ground leakage current:	1.0 mA @ 50/60 Hz, 264 VAC input		
Output			
Maximum power:	110 W convection (75 W with cover) 175 W with 30 CFM forced air (130 W with cover)		
Adjustment range:	2:1 wide ratio minimum		
Standby outputs:	dby outputs: 5 V @ 2 A regulated ±5%		
Hold-up time:	20 ms @175 W load at nominal line		
Overload protection:	Short circuit protection on all outputs. Case overload protected @ 110-145% above peak rating		
Overvoltage protection:	10% to 40% above nominal output		
Aux output:	12 V @ 1 A -5 %, +10%		





# **Special Features**

- Active power factor correction
- IEC EN61000-3-2 compliance
- Wide Range Adjustable output Remote sense on main output
- Single wire current sharing
- Power fail and remote inhibit
- Built-in EMI filter
- Low output ripple
- Overvoltage protection
- Overload protection
- Thermal overload protection
- DC power good
- 5 V standby output
- 12 V Aux output
- Optional cover (-C suffix)

# Safety

- VDE 0805/EN60950 (IEC950)
  UL UL1950
  CB Certificate and report
  CSA 22.2-234 Level 3
- CE Mark (LVD)
- NEMKO EN 60950/EMKO-TUE

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Connector	LPS17x	
SK1	PIN 1	+12 V
	PIN 2	5 V Standby
	Pin 3	Common
	Pin 4	V1 SWP
	PIN 5	Common
	PIN 6	+V1 sense
	PIN 7	Sense common
	PIN 8	Remote inhibit
	PIN 9	DC power good
	PIN 10	POK
SK2	TB-1	COMMON
	TB-2	Main output
SK3	PIN 1	GROUND
	PIN 2	LINE
	Pin 5	NEUTRAL

# Logic ControlPower failure:TTL logic signal goes high 100 - 500 msec after V1 output; It goes low at<br/>least 4 msec before loss of regulationRemote inhibit:Requires contact closure to inhibit outputsRemote sense:Compensates for 0.5 V lead drop min. Will operate without remote<br/>sense connected. Reverse connection protected.DC - OK:TTL logic signal goes high after main output is in regulation. It goes low<br/>when there is a loss of regulation

# **Environmental Specifications**

Operating temperature:	0° to 50 °C ambient; derate each output at 2.5% per degree from 50° to 70 °C
Low temperature start:	-20 °C
Temperature coefficient:	±0.4% per °C
Storage temperature:	-40° to 85 °C
Electromagnetic susceptibility:	Designed to meet IEC EN61000-4, -2, -3, -4, -5, -6, -8, -11 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 5Hz to 500Hz, operational
MTBF demonstrated:	>550,000 hours at full load and 25 °C ambient conditions

# Ordering Information

oracin							
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>
LPS172	5 V (2.5 - 6 V)	0 A	22 A	35 A	38 A	±2%	50 mV
LPS173	12 V (6 - 12 V)	0 A	9.1 A	15 A	16.5 A	±2%	120 mV
LPS174	15 V (12 - 24 V)	0A	7.3 A	12 A	13.2 A	±2%	<1%
LPS175	24 V (24 - 54 V)	0A	4.5 A	7.5 A	8.2 A	±2%	<1%

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  $\mu F$  in parallel with a 0.1  $\mu F$  capacitor at rated line voltage and load ranges.

4. Remote inhibit resets OVP latch.

Note: -C suffix added to the model number indicates cover option.

## Mating Connectors

AC Input (SK3):	Molex 09-50-8051 (USA) Molex 09-91-0500 (UK) PINS: 08-58-0111		
DC Outputs (SK2):	Molex 19141-0058		
Control Signals (SK1):	Molex 90142-0010 (USA) PINS: 90119-2110 or Amp: 87977-3 PINS: 87309-8		
Emerson Network P	ower Connector Kit #70-841-016,		

Emerson Network Power Connector Kit #70-841-016, includes all of the above

- 1. Specifications subject to change without notice.
- 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.
- Specifications are for convection rating at factory settings at 115 VAC input, 25 °C unless otherwise stated.
- 6. Warranty: 2 year
- 7. Weight: 1.8 lbs/0.85 kg

# **Mechanical Drawing**







# Americas

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

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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

## techsupport.embeddedpower @emerson.com

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