

LPS250 Series

250 Watts

Data Sheet

Total Power: 250 Watts
Input Voltage: 85 - 264 Vac
 120 - 300 Vdc
of Outputs: Single

SPECIAL FEATURES

- Active power factor correction
- IEC EN6100-3-2 compliance
- Remote sense & remote inhibit
- Power fail
- Single wire current sharing
- Built-in EMI filter
- 2:1 Wide range output voltage adjust
- 2 Supervisory outputs 5 V and 12 V
- Overvoltage protection
- Overload protection
- Thermal overload protection
- DC power good
- 120 kHz switching frequency
- RoHS compliant
- Cover -C
- Optional top with fan cover -CF
- Optional end fan cover -CEF

SAFETY

- VDE 60950
- UL 60950
- CSA 60950
- NEMKO 60950
- CB Certificate and report 2186
- CE Mark (LVD)



Electrical Specifications

Input

Input range	85 - 264 Vac; 120 - 300 Vdc
Frequency	47 - 440 Hz
Inrush current	20 A max, cold start @ 25 °C
Efficiency	75% typical at full load
EMI filter	FCC Class B conducted and radiated CISPR 22 Class B conducted and radiated EN55022 Class B conducted and radiated VDE 0878 PT3 Class B conducted and radiated
Safety ground leakage current	< 0.5 mA @ 50/60 Hz, 264 Vac input

Output

Maximum power	With cover: 250 W with 30 CFM forced air. (-C) (-CF) (CEF)
Supervisory output	5 V @ 100 mA regulated; 12 V @ 500 mA
Adjustment range	2:1 wide ratio
Hold-up time	20 ms @ 250 W load, 115 VAC nominal line
Overload protection	Short circuit protection on all outputs. Case overload protected @ 10 - 145% above peak rating
Overvoltage protection	5 V output: 5.7 to 6.7 Vdc. Other models 10% to 25% above nominal output

Logical Control

Power failure	TTL Logic signal goes high 50 - 150 msec after 5 V output. It goes low at least 4 ms before loss of regulation
Remote on/off	Requires an external contact (N.O or N.C) to inhibit outputs
DC - OK	TTL logic goes high 50 - 150 msec after the output. It goes low when there is loss of regulation.
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 at 2.5% per degree from 50° to 70 °C
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%
Vibration	Three orthogonal axes, sweep at 1 oct/min, 5 min. dwell at four major resonances 0.7 G peak 5 Hz to 500 Hz, operational
MTBF demonstrated	> 550,000 hours at full load and 25 °C ambient conditions

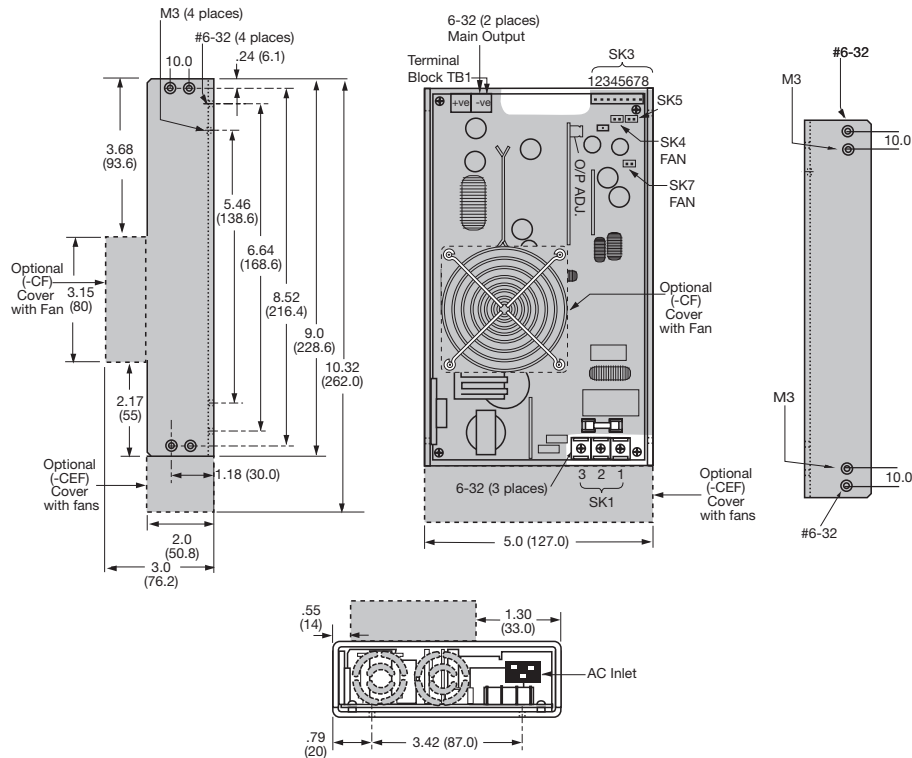
Ordering Information

Model Number	Output Voltage	Minimum Load	Maximum Load with 30CFM Forced Air	Peak Load ¹	Regulation ²	Ripple P/P (PARD) ³
LPS252-C	5 V (3 - 6 V)	1.50 A	50 A	60 A	±2%	50 mV
LPS253-C	12 V (6 - 12 V)	0.63 A	21 A	25 A	±2%	120 mV
LPS254-C	15 (12 - 24 V)	0.50 A	16.7 A	20 A	±2%	150 mV
LPS255-C	24 V (24 - 48 V)	0.32 A	10.4 A	12.5 A	±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. If optional CF or CEF fans are not used, 30CFM forced air cooling needs to be provided and is required through the length of the power supply. Not convection rated.
5. Output voltage adjustment requires a minimum load.
6. Remote inhibit resets OVP latch
7. This product is a Component Power Supply and is only for inclusion by professional installers within other equipment and must not be operated as a standalone product. EMC compliance to appropriate standards must be verified at the system level. This product is for sale to OEMs and System Integrators, including through Distribution Channels. It is not intended for sale to End Users.

Note: -CF suffix added to the model number indicates cover with top fan. -CEF suffix added to the model number indicates cover with dual end mounted fan cover and AC inlet.

Mechanical Drawing



Pin Assignments		
Connector		
SK1	PIN 1	Neutral
	PIN 2	Line
	PIN 3	Ground
SK3	PIN 1	+ Remote sense
	PIN 2	- Remote sense
	PIN 3	Remote inhibit (N.O.)
	PIN 4	Remote inhibit (N.C.)
	PIN 5	Common
	PIN 6	Current sharing
	PIN 7	Power fail
	PIN 8	DC Power Good
SK4	PIN 1	+ Fan's power source (12 V @ 500 mA)
	PIN 2	- Fan's power source (12 V @ 500 mA)
SK5	PIN 1	+ Supervisory output supply (5 V @ 100 mA)
	PIN 2	- Supervisory output supply (5 V @ 100 mA)
SK7	PIN 1	+ Fan's power source (12 V @ 500 mA)
	PIN 2	- Fan's power source (12 V @ 500 mA)

Mating Connectors	
SK3	Molex 22-01-1084 PINS:08-70-0057
SK4	Molex 22-01-3027 PINS: 08-50-0114
SK5	Molex 22-01-3027 PINS: 08-50-0114
SK7	Molex 22-01-3027 PINS: 08-50-0114
Artesyn Embedded Technologies Connector Kit #70-841-005, includes all of the above	

1. Specifications subject to change without notice.
2. All dimensions in inches (mm), tolerance is $\pm 0.02'' (\pm 0.5 \text{ mm})$
3. Specifications are at factory settings.
4. To enable normally closed remote inhibit, cut jumper J1.
5. Mounting maximum insertion depth is 0.12".
6. Warranty: 2 year
7. Weight: 2.6 lb / 1.19 kg

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