

Features

- 3" x 5" x 1.3" Package
- 240 Watts
- EN55015 Class B Conducted EMI
- 50°C Ambient Operation with 300 LFM
- 130 Watts @ 70C (Conduction Cooled)
- 190 Watts @ 60C (200 LFM)
- 160 Watts @ 70C (200 LFM)
- Universal Input 90-264Vac
- Meets IEC61000-3-2 Class C for 0% to 100% LED Dimming Applications(1 Watt input power to full load)
- EN60950 2nd Edition



Description

The LB240 model is the highest density conduction cooled power supply in a compact 3X5 package. Providing 240 Watts of power at 50°C ambient with 300 LFM airflow, the LB240 is designed to meet global lighting requirements and has a built-in EMI filter to meet EN55015 class B.

Model Chart

Model* Number	Volts	Maximum Output Current (A)	Minimum Load	Ripple & Noise**	Total Regulation	OVP Threshold
LB240S56K	56V	4.29	0A	560mV pk-pk	±3%	66V± 4V
LB240S48K	48V	5	0A	480mV pk-pk	±3%	56V± 3V
LB240S24K	24V	10	0A	240mV pk-pk	±3%	29V±2.5V

* For Cold Plate cooling, add option H. Consult the factory for model number availability.

**Ripple is 800mV pk-pk @ -10°C

General Specifications

AC Input	100-240Vac, ±10%, 47-63Hz, 1∅	Turn On Time	Less than 3 sec. @115Vac, Full Load
Input Current	Max. 115Vac:2.6A, 230Vac: 1.3A	Hold-up Time	12 mSec min, 115Vac/60Hz
Inrush Current	< 55A peak, 264Vac, cold start, turn on at AC zero crossing	Overtemperature Protection	Sensing transformer temperature, 165°C latching type, requires input power recycling to reset.
Input Fuse	5A, 250Vac fuse provided on all models	Overload Protection	Hiccup Mode
Earth Leakage Current	<500µA@264Vac, 60Hz, NC	Short Circuit Protection	Hiccup Mode, auto recovery. A direct hard short may latch off the converter; remove AC input to reset.

Efficiency	VIN 24V 48V 56V (Vac) ----- 115 88% 90% 90% 230 90% 92% 92%	Overvoltage Protection	OVP latch, remove AC input to reset.
Output Power	240 Watts max. with 300 LFM	Switching Frequency	PFC: Fixed, 65kHz Main Converter: Variable 35-200kHz, 65-70kHz at full load
Transient Response	For 5% to 50% or 50% to 5% load change: <20 mSec, return to 1% of nominal, di/dt <0.2A/uS. Max voltage deviation=3% For 50% to 100% or 100% to 50% load change: <1 mSec, return to 1% of nominal, di/dt <0.2A/uS. Max voltage deviation=3% For 5% to 100% or 100% to 5% load change: 25 mSec, return to 1% of nominal, di/dt <0.2A/uS. Max voltage deviation=4%	Isolation	Input-Output: 3,000Vac Input-Ground: 1,800Vac Output-Ground: 1,500Vac
Ripple and Noise	0.5%rms, 1% pk-pk, see chart.	Operating Temperature	-10°C to +70°C(See Below Chart) Start Up at -40°C
Output Voltage	See Model Chart	Heat-Sink Temperature	To maintain Safety approval & life expectancy, heat-sink temperature should not exceed 85°C
Voltage Adjustability	Fixed Output	Storage Temperature	-40°C to +85°C
Minimum Load	Not required	Altitude	Operating: -457 to 3000 m Non-operating: -457 to 12,192m.
Total Regulation	+/- 3% combined line, load and initial setting.	Relative Humidity	5% to 95%, non-condensing
Vibration	Operating: 0.003g ² /Hz, 1.5grms overall, 3 axes, 1 hr/axis Non-Operating: 0.026g ² /Hz, 5.0grms overall, 3 axes, 10 min/axis	Shock	Operating: Half-sine, 20gpk, 10ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 gpk, 10 ms, 3axes, 6 shocks total
Dimensions	W: 3.0" x L: 5.0" x H: 1.3" "H" option: 3.0"x 6.0" x1.5"	Safety Standards	EN/CSA/UL/IEC 60950-1, 2nd Edition
Weight	370g "H" option: TBD	Life	100,000 hours, 50C for 240W 40,000 hours, 70C for 130W
Audible Noise	20 dB A max per ISO7779 with 0% - 100% static load 25 dB A max per ISO7779 with 0% - 100% - 0% transient load	MTBF	438,540 hours. Conditions: Standard: Telcordia SR-332 issue 3 Ambient temp: 25c Voltage: 110v Level: 0/1 Environment: Ground, fixed, controlled

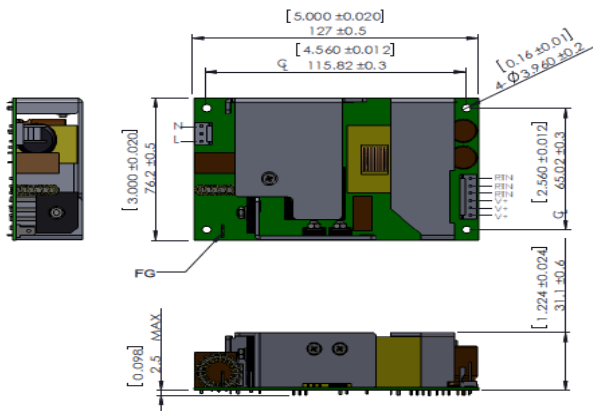
The specification above is based on 25°C ambient and where applicable at nominal input voltage of 100 to 240VAC.

Ambient	Cooling Method	Wattage (watts)
50°C	Forced Air, 300 LFM	240
60°C	Forced Air, 200 LFM	190
70°C	Forced Air, 200 LFM	160
70°C with Max. Temperature of primary heat-sink to be held under 85°C	Conduction	130
50°C	Convection	160
40°C with "H" option, Max. Temp of cold plate to be held under 60°C	Conduction	200

EMI/EMC Compliance

Conducted Emissions	EN55015 Class B, FCC Part 15, Subpart B, Class B
Radiated Emissions	EN55022 Class A, FCC Part 15, Subpart B, Class A
Static Discharge Immunity	EN61000-4-2, 6kV Contact Discharge, 8kV air discharge
Radiated RF Immunity	EN61000-4-3, 3V/m.
EFT/Burst Immunity	EN61000-4-4, 2kV/5kHz
Line Surge Immunity	EN61000-4-5, 1kV differential, 2kV common-mode
Conducted RF Immunity	EN61000-4-6, 3Vrms
Power Frequency Magnetic Field Immunity	EN61000-4-8, 3A/m
Voltage Dip Immunity	EN61000-4-11, 100%, 10ms; 30%, 500ms; 60%, 100ms; Performance Criteria A, A, & A at 58% load.
Line Harmonic Emissions	EN61000-3-2, Class A, D For Class C from 1W input power to full load
Flicker Test	EN61000-3-3, Complies (dmax<6%)

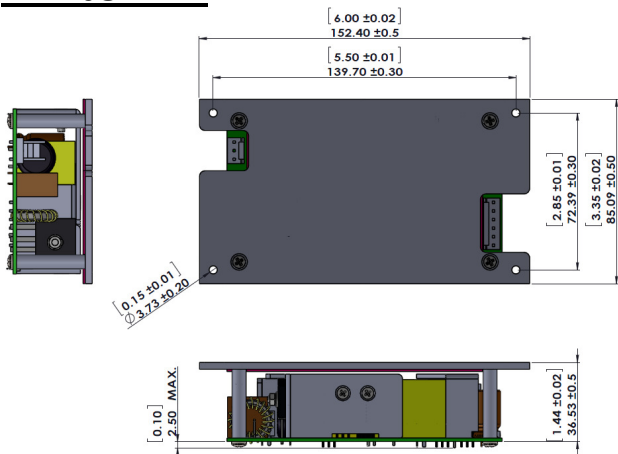
Mechanical Drawing



Notes

1. All dimensions in inches (mm), tolerances are mentioned for each measurement
2. Mounting holes should be grounded for EMI purposes.
3. FG is safety ground connection.
4. The power supply requires mounting on Metal standoffs min. of 0.20" (5mm) in height

LB240SXXKH



Connector Information

Input Connector J100	Ground (FG)	DC Output Connector J300	
PIN 1) AC LINE PIN 2) EMPTY PIN 3) AC NEUTRAL	0.25" FASTON TAB	Term. 1,2,3: RTN Term. 4,5,6: +Vout	
Mating Connector: AMP 640250-3 Pins: 640252-2	Mating Connector: Molex 190020001	Mating Connector: AMP 640250-6 Pins: 640252-2	