

# SL POWER NGB150 SERIES

120/150 Watts Medical/Industrial



Advanced Energy's SL NGB150 series provide for a very wide range of AC-DC embedded power requirement. offering voltages of 12 V, 15 V, 19 V, 24 V, 24 V or 48 V, together with an optional 5 V standby output. Each model accepts a universal input of 85 to 264 VAC. full-load efficiency of greater than 90 percent, These compact switch-mode power supplies feature output overvoltage and short-circuit protection, these units are ideal for use in industrial and medical applications.

## AT A GLANCE

### Total Power

150 W

### Input Voltage

85 to 264 VAC

### # of Outputs

Single

## SPECIAL FEATURES

- 150 W max output power
- 4.0" x 2.0" x 1.26"
- Industrial/Medical safety
- -40 °C to 85 °C with derating
- Optional 5 V @ 0.5 A housekeeping
- High efficiency: 90% typical
- ± 10% adjustment range
- Margin programming

## SAFETY

- UL EN62368-1/UL60601
- CSA No. 62368-1/60601
- CB Report IEC62368-1  
IEC60601-1

## Compliance

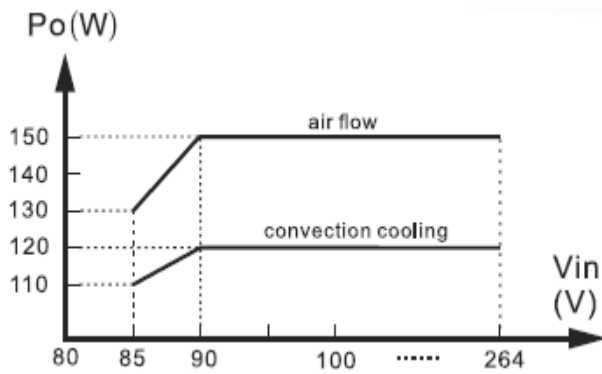
- EMI Class B
- EN61000 Immunity

**ELECTRICAL SPECIFICATIONS**

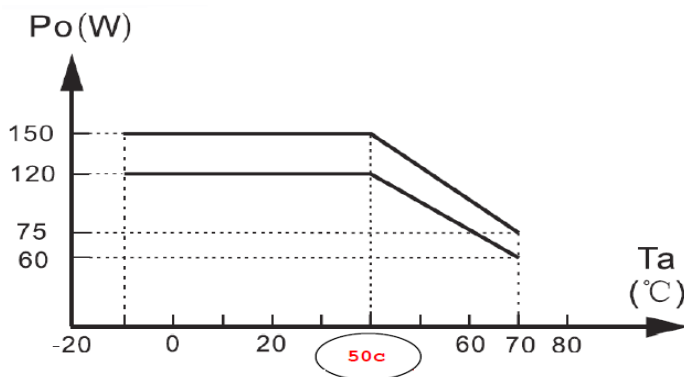
Input	
Input range	85 to 264 VAC (Operating) (Safety Rating 100 to 240 VAC). Derating below 90 VAC
Frequency	47 to 63 Hz
Power factor	0.9 min
Inrush current	240 VAC, cold start: will not exceed 80 A peak (<2 mS duration).
Power factor	0.90 min, 230 VAC, 80 to 100% load vector, 25 deg C ambient
Harmonics	Meets EN61000-3-2, Class A
Input current	TBDA max at 115 VAC, TBDA at 230 VAC
Hold up time	16 ms minimum for main O/P, Measured at Full Load from 115 VAC and Vout reduces to 90% of original value before the AC drop out. Per the new 4th edition specification
Efficiency	91% min at 115 VAC/230 VAC, full load
Leakage current	< 0.5 mA at 264 VAC (Output–Earth) <100 uA/500 uA @264 VAC, 60 Hz input, NC/SFC (Output–Input)
Turn On Time	3 S max at 115 VAC
Insulation Safety Rating	Input to GND 1500 VAC (1 MOPP) Input to Output 4000 VAC (2 MOPP) Output to GND 1500 VAC (1 MOPP)
Output	
Output Power	120 Watts (Convection); 150 Watts (200 LFM Airflow)
Load Regulation	± 2% for Main & 5 VSB, ± 20% for Fan
Line Regulation	± 0.5%
Minimum Load	None Required
Ripple and Noise	1% of Vout
Output Adjustability	± 10%
Capacitive Load	100 uF/A
Over Load Protection	120% to 180% of rated output current value, Hiccup Mode, Auto-Recovery
Short Circuit Protection	Short across the output terminals will not cause damage to the unit. Hiccup Mode
Over Voltage Protection	115% to 155% of nominal output voltage. Latching, recycle AC power to recover.
Over Temperature Protection	Will shut down upon an overtemperature condition, auto-recovery.

ENVIRONMENTAL SPECIFICATIONS

Operating temperature	-20 °C to +70 °C (output power derated to TBD load at 70 °C)
Power Derating over temperature	Derate output power linearly above 50 °C to TBD at 70 °C
Storage temperature	-40 °C to +85 °C
Humidity	5% to 95%, non-condensing
MTBF	>250 K hours
Altitude	Operating: -500 m to 5,000 meters
Vibration	Random vibration per MIL-STD-810E, Method 514.4, Cat. 1, Figure 514.4-1, 1 hr in each of three axes
ROHS	Product must be ROHS compliant
REACH	REACH compliance required



Output Power Vs Input Voltage



Output Power Vs Ambient Temperature

ORDERING INFORMATION

Model Number	Output Voltage	Minimum Load	Maximum Load with Convection Cooling	Maximum Load with 200LFM Forced Air	Max Power	Regulation	Ripple P/P(PARD)
NGB150S12K	12 V	0 A	10 A	12.5 A	150 W	± 2%	120 mV
NGB150S15K	15 V	0 A	8.0 A	10.0 A	150 W	± 2%	150 mV
NGB150S19K	19 V	0 A	6.32 A	7.9 A	150 W	± 2%	190 mV
NGB150S24K	24 V	0 A	5.0 A	6.25 A	150 W	± 2%	240 mV
NGB150S48K	48 V	0 A	2.5 A	3.13 A	150 W	± 2%	480 mV
NGB150S12C	12 V	0 A	10 A	12.5 A	150 W	± 2%	120 mV
NGB150S15C	15 V	0 A	8.0 A	10.0 A	150 W	± 2%	150 mV
NGB150S19C	19 V	0 A	6.32 A	7.9 A	150 W	± 2%	190 mV
NGB150S24C	24 V	0 A	5.0 A	6.25 A	150 W	± 2%	240 mV
NGB150S48C	48 V	0 A	2.5 A	3.13 A	150 W	± 2%	480 mV

\*Note: Class I Base Model ("K" in model number) Class II Base Model ("C" in model number).

PIN ASSIGNMENT

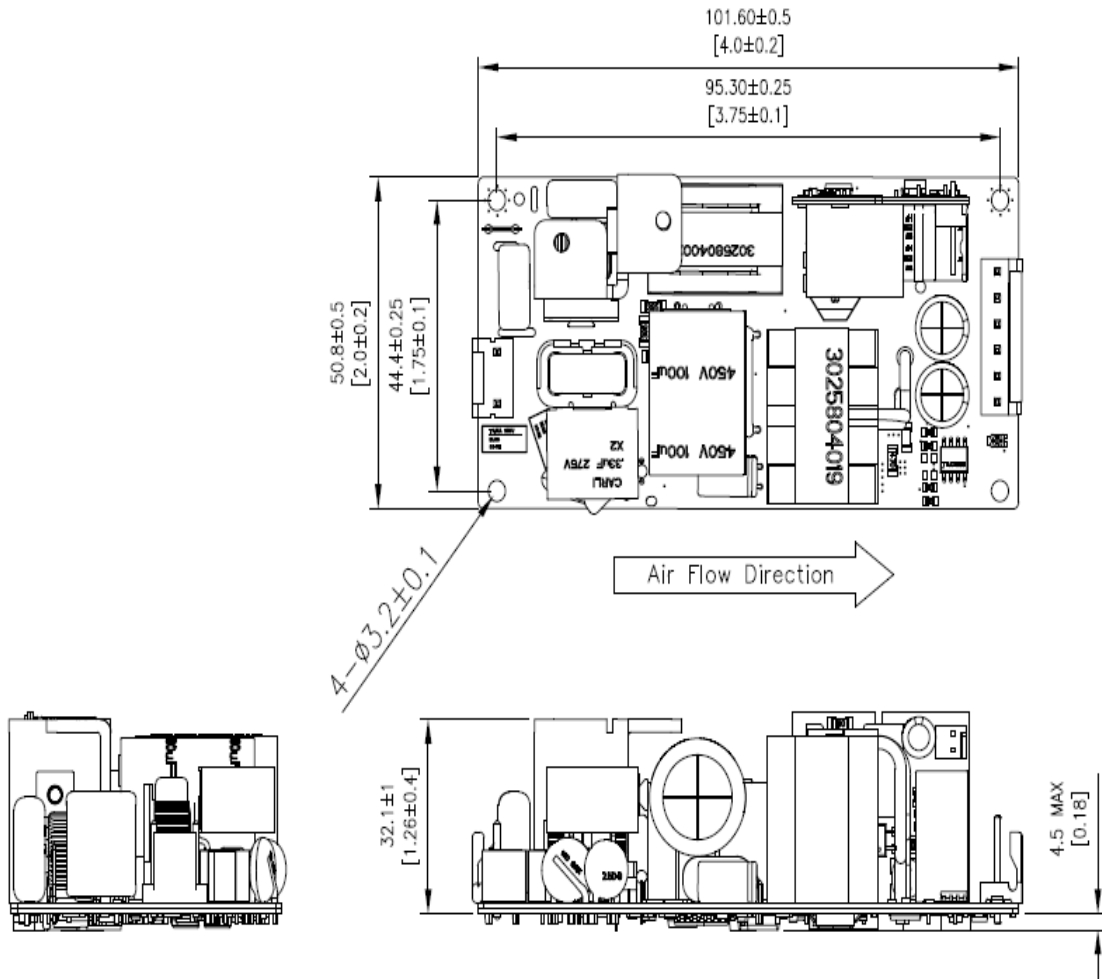
Signals	Name Description	Pin Number(s)
AC Input	AC Line	1
	AC Neutral	3
DC Output	Output Vdc	1, 2, 3
	Return	4, 5, 6
Standby Connector	5V Standby	1
	5V Standby Return	2
Fan Connector	Fan Output	1
	Fan Return	2

MATING CONNECTORS

AC Input	TE/AMP# 640445-3 Mates With: AMP 640250-3
DC Input	TE/AMP# 640445-6 Mates With: AMP 640250-6
Standby Connector	Landwin P/N: 2511P0200T Mates With: 260050200
Fan Connector	Landwin P/N: 2511P0200T Mates With: 260050200

\*Note: All connectors can be applied with equivalent products.

MECHANICAL DRAWINGS





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## ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than three decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

PRECISION | POWER | PERFORMANCE

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