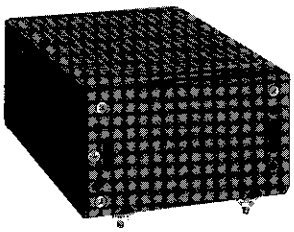
LN/LD Series — Low noise linear power supplies



MIL-STD-810C Specifications

Lowest Output Ripple & Noise

High Line & Load Stability

Rugged Construction

High Temperature Operation

Convection Cooling

5 Year Warranty

Lambda's LD and LN Series linear power supplies are designed to meet the ever increasing requirements of high reliability and ease of use in today's modern equipment. They feature extremely low output ripple and noise – ideal for medical and industrial applications, and test equipment employing sensitive analog circuits.

Lambda's LD and LN Series are manufactured using only the highest grade components. Our stringent in-house component derating ensures that the LD and LN Series provide the highest reliability for any low-noise application.

Similar products		Page
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AC Input ..... 105-127VAC, 210-254VAC (by transformer tap change), 47-440Hz. With derating (consult factory).

EMI ..... MIL-I-6181D – Conducted and radiated EMI with one output terminal grounded.

DC Output Controls ..... LD Series: volt per volt.
LN Series: volt per volt (not on LND).

Line Regulation ..... LD Series: 0.005% +0.5mV.
LN Series: 0.1% (0.15% for LNS-Z).

Load Regulation ..... LD Series: 0.005% +0.5mV.
LN Series: 0.1% (0.15% for LNS-Z).

Ripple and Noise ..... LD Series: 150uV RMS, 1mV pk-pk.
LN Series: 1.5mV RMS, 5mV pk-pk.

Overshoot ..... No overshoot on turn-on, turn-off or power failure.

Overvoltage Protection .... Overvoltage protection module crowbars output when trip level is exceeded – standard on all 5V models, except the LNS-P-5.

Overload Protection ..... Automatic electronic current limiting circuit limits the output current to a preset value, thereby providing protection for the load as well as the power supply.

Cooling ..... All units are convection cooled. No external heat sinking or forced air is required.

Operating Temperature Range Continuous operation from 0°C to +71°C on LN Series and 0°C to +60°C on LD Series with suitable derating above +40°C.

Storage Temperature ..... -55°C to +85°C.

Fungus Proofing ..... No fungi nutrient material used.

Temperature Coefficient .... LD Series: 0.01% + 10uV per °C.
LN Series: 0.03% per °C.

Isolation ..... Minimum, 10 Megohm isolation from DC to ground at 750VDC.

Remote Sensing ..... Provision is made for remote sensing to eliminate the effect of power output lead resistance on DC regulation.

Resistive Programming ..... LD Series: 1000 ohms/volt.
LN Series: 200 ohms/volt (not on LND).

Thermal Protection ..... Thermostat - automatically reset when overtemperature condition is eliminated.

Mounting ..... LN/LDS-Y, X, W – three mounting surfaces, three mounting positions.
LN/LDS-P – one mounting surface, one mounting position.

Input and Output Connections Heavy-duty screw terminals on printed circuit board.

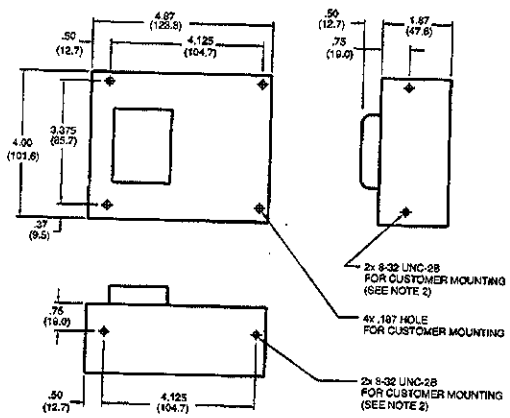
Safety Agency Approval .... UL 1950, CSA 950.

Warranty ..... 5 years.

OUTPUT	POWER (W)	MAX CURRENT AMPS AT 30°	40°	50°	60°	71°	MODEL
Single Output							
5V (4.75-5.25)							
	14	2.70	2.70	2.40	2.10	1.50	**LNS-Z-5-0V**
	28	5.40	5.40	4.60	3.80	2.80	**LNS-Y-5-0V**
	45	8.50	8.50	7.60	6.20	4.50	**LNS-X-5-0V**
	63	11.90	11.90	10.40	8.50	6.40	**LNS-W-5-0V**
	110	20.90	20.90	18.50	15.70	12.40	**LNS-P-5**
12V (11.4-12.6)							
	20	1.55	1.55	1.45	1.40	1.20	**LNS-Z-12**
	45	3.60	3.60	3.15	2.60	2.00	**LNS-Y-12**
	70	5.50	5.50	4.70	3.80	2.80	**LNS-X-12**
	91	7.20	7.20	6.10	5.00	3.60	**LNS-W-12**
	167	13.30	13.30	11.80	9.50	6.95	**LNS-P-12**
15V (14.25-15.75)							
	20	1.30	1.30	1.20	1.10	0.90	**LNS-Z-15**
	48	3.10	3.10	2.80	2.35	1.80	**LNS-Y-15**
	74	4.70	4.70	4.10	3.35	2.40	**LNS-X-15**
	103	6.55	6.55	5.70	4.70	3.15	**LNS-W-15**
	180	11.40	11.40	10.10	8.10	6.00	**LNS-P-15**
24V (22.8-25.2)							
	20	0.81	0.81	0.68	0.55	0.36	**LNS-Z-24**
	53	2.10	2.10	1.90	1.60	1.00	**LNS-Y-24**
	82	3.25	3.25	2.75	2.00	1.20	**LNS-X-24**
	116	4.60	4.60	3.90	3.10	2.10	**LNS-W-24**
	217	8.60	8.60	7.60	6.40	4.80	**LNS-P-24**
28V (26.6-29.4)							
	22	0.75	0.75	0.60	0.45	0.32	**LNS-Z-28**
	53	1.80	1.80	1.65	1.35	0.90	**LNS-Y-28**
	85	2.90	2.90	2.50	1.50	1.00	**LNS-X-28**
Dual Output							
±15 to ±12V	–	0.50	0.50	0.40	0.30		**LND-Z-152**
±15 to ±12V	–	1.20	1.00	0.80	0.50		**LND-Y-152**
	–	1.00	0.90	0.70	0.40		
±15 to ±12V	–	2.10	1.80	1.40	0.90		**LND-X-152**
	–	2.00	1.60	1.20	0.80		
±15 to ±12V	–	3.00	2.80	2.30	1.80		**LND-W-152**
	–	2.80	2.50	2.10	1.40		
±15 to ±12V	–	5.00	4.50	3.70	2.70		**LND-P-152**
	–	4.40	3.80	3.10	2.40		

For use without cover increase output by 15%.

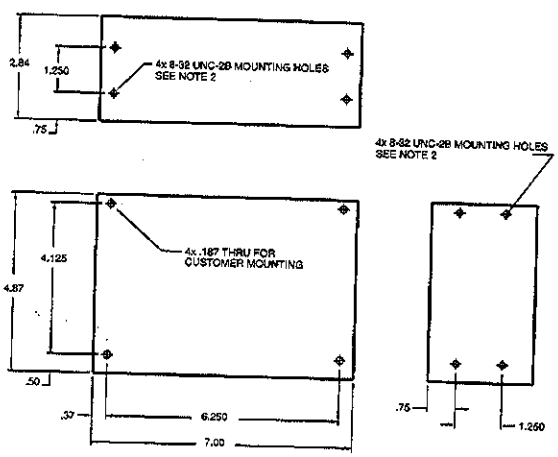
LNS-Z/LND-Z



NOTE:

1. DIMENSIONS ARE IN INCHES EXCEPT DIMENSIONS ( ) ARE IN MM.
2. 8-32 UNC-2B TAPPED HOLES FOR CUSTOMER MTG. SCREWS MUST NOT PROTRUDE INTO POWER SUPPLY BY MORE THAN .25 (6.3).
3. CUSTOMER MUST PROVIDE CLEARANCE AROUND VENT HOLES TO ALLOW FOR AIR FLOW.
4. WEIGHT: NET 3 LBS, SHIP 3 1/4 LBS.

/LNS-X/LND-X



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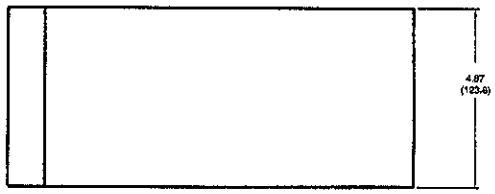
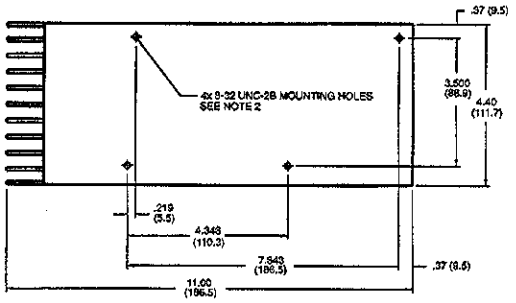
4. WEIGHT: 7 3/4 LBS



SIDE VIEW



BOTTOM VIEW

WEIGHT:

MODEL	NET LBS	NET LBS
LND-P	14	15
LNS-P	15 1/2	17

NOTE:
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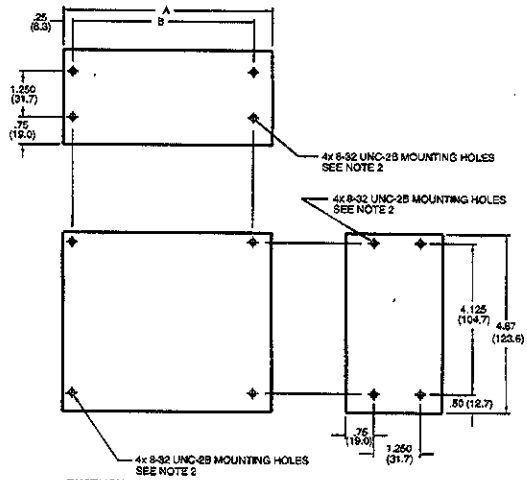
2. 4x 8-32 UNC-2B TAPPED HOLES FOR CUSTOMER MTG.
   SCREWS MUST NOT PROTRUDE INTO POWER SUPPLY BY MORE THAN .25 (6.3).



DIMENSIONS:

MODEL	A	B	C	D
LDS-W,LNS-W,LND-W	9.00 (228.6)	8.000 (203.2)	.50 (12.7)	2.84 (72.1)
LDS-Y,LNS-Y,LND-Y	5.62 (142.7)	4.875 (123.8)	.56 (14.2)	2.59 (65.7)

WEIGHT:

MODEL	NET LBS	SHIP LBS
LDS-W,LNS-W,LND-W	7 3/4	8 1/4
LDS-Y,LNS-Y,LND-Y	5	5 1/2

NOTE:
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   SCREWS MUST NOT PROTRUDE INTO POWER SUPPLY BY MORE THAN .25 (6.3).
3. CUSTOMER MUST PROVIDE CLEARANCE AROUND VENT HOLES
   TO ALLOW FOR AIR FLOW.