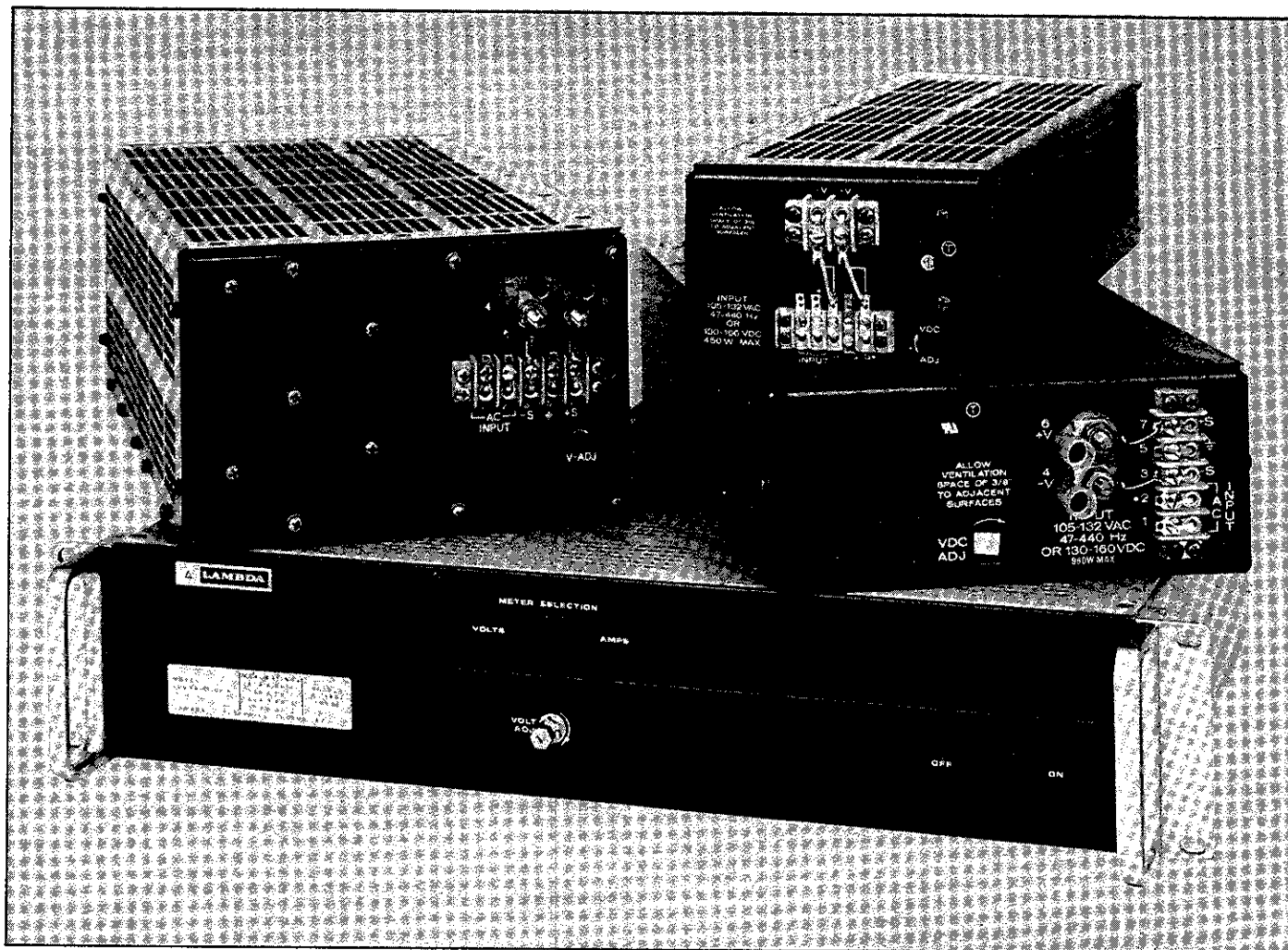


5 YEAR GUARANTEED SWITCHING

Lambda LG and LGA series



Features—LG and LGA series

5-year guaranteed switching power supplies

4 package sizes up to 190A, up to 48 Volts

Convection cooled, no fans, or blowers needed

Lambda LAS-3800 IC Control Circuit

Lambda hybrid overvoltage protector crowbars output and shuts down inverter

Lambda MIL-T-27C grade 6 magnetics, vacuum impregnated varnished layer wound with electrostatic shield Class H, 180° C, UL approved

LG power supplies meet MIL-STD-810C, MIL-I-6181D and FCC docket 20780 Class A

Available with 110/208/230 VAC input, 20.5-32 or 44-58 VDC input, 20.5-32 or 44-58 VDC output

Sprague computer grade hermetically sealed 10-year life electrolytic capacitor

Hermetically sealed semiconductors

Lambda CC4®* Printed Circuit Board plated thru-holes fungus inert, flame retardant

*Licensee of Photo Circuits Inc.

MIL-R-26 type wire wound resistors

MIL-W-16878 wire UL approved

Chassis designed for easy servicing

UL Recognized ("D" option under evaluation)

CSA Certified (LGS-FA and "D" option under evaluation)

Specifications—LG and LGA Series

DC Output

Voltage ranges shown in tables.

REGULATED VOLTAGE

regulation, line	0.1% for 105 to 132 VAC, 187-242 VAC, 205-265 VAC (187-265 VAC on LGS-EEA, FA)
regulation, load	0.1% for 0 to full load
ripple and noise	10 mV RMS, 35 mV p-p for 5 and 6 V units 15 mV RMS, 100 mV p-p for 12 thru 28 V units 35 mV RMS, 150 mV p-p for 48 V units.
remote programming resistance	1000 ohms/volt nominal
remote programming voltage	volt per volt
temperature coefficient	0.03% per °C

AC Input

line	105-132 VAC; 47-440 Hz (For FA and EEA models derate 10% for operation below 57 Hz)
power	450 watts max. at 0.6 P.F. for LGS-5A 970 watts max. at 0.7 P.F. for LGS-6A 1350 watts max. at 0.6 P.F. for LGS-EEA 1500 watts max. at 0.7 P.F. for LGS-FA

DC Input 20.5-32 VDC. LGS-5-C packages only. Input voltage specs comply with minimum usable voltage for lead acid batteries.
44-58 VDC "D" models only.
145 VDC $\pm$ 10%. LGS-5A, LGS-6A packages only.

Efficiency 64% minimum except LGS-6-D which is 60% minimum, LGS-5-C which is 55% minimum and LGS-FA which is 70% minimum.

Soft-start Circuit: (LGS-6A, LGS-EEA, LGS-FA only)

Limits in-rush current at turn-on.

Ambient Operating Temperature

Continuous duty 0° to 71°C.

Storage Temperature Range

-55°C to +85°C.

Overload Protection

ELECTRICAL

Pre-set electronic current limiting at factory. Internal failure protection by means of line fuse.

THERMAL

By self-resetting thermostat.

Overvoltage Protection

Built-in fixed overvoltage standard on all units. When a pre-set voltage is exceeded, the overvoltage protector crowbars the output and removes the inverter drive.

EMI

CONDUCTED

Conforms to MIL-I-6181D (FCC docket 20780 Class A—LGA Series).

Cooling

Convection cooled.

DC Output Controls

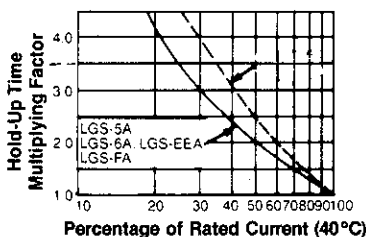
Simple screwdriver voltage adjustment over the voltage range. For LGS-FA, output voltage adjustable by means of potentiometer on the front panel.

Metering (LGS-FA only)

Digital panel meter monitors output voltage/current by means of Volt/Amp selector switch.

Input and Output Connections

By heavy duty terminal blocks, heavy duty studs on all LGS-6A, EEA, and FA.



Mounting

Two mounting surfaces, three mounting positions for LGS-5A. One mounting position for LGS-6A, 6D, EEA, and FA. For LGS-5C and 5A-D models derate current 10% for mounting positions in which the radiator fins are not vertical.

Power Failure

See graph for hold-up times vs. load current on all units. (Except LGS-C and LGS-AD models). Hold-up time is guaranteed at full load, maximum output voltage, low line and 60 Hz.

Remote Sensing

Provision is made for remote sensing to eliminate effects of power output lead resistance on DC regulation.

Fungus Proofing

All units are rendered fungi inert.

Military Specifications

The LGS series has passed the following tests in accordance with MIL-STD-810C.*

- 1) Low Pressure—Method 500.1, Procedure I.
- 2) High Temperature—Method 501.1, Procedure I & II.
- 3) Low Temperature—Method 502.1, Procedure I.
- 4) Temperature Shock—Method 503.1, Procedure I.
- 5) Temperature—Altitude—Method 504.1, Procedure I. Class 2 (0°C operating)
- 6) Humidity—Method 507.1, Procedure I.
- 7) Fungus—Method 508.1, Procedure I.
- 8) Vibration—Method 514.2, Procedure X & XI.
- 9) Shock—Method 516.2, Procedure I & III.

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

*5A, 6A and EEA packages only

Physical Data Package Model	Weight		Size Inches
	Lbs. Net	Lbs. Ship	
LGS-5A	9-1/2	11	3-3/16 x 4-15/16 x 14-5/8
LGS-6A	18	21	3-3/16 x 7-1/2 x 15-1/8
LGS-EEA	26	31	4-15/16 x 7-1/2 x 16-1/2
LGS-FA	38	48	3-1/2 x 19 x 14

Options (EEA & FA only)

AC Input Add' Suffix	For Operation at:	Price Qty. 1-14	Price Mixed Models Qty. 15 & up	Price Single Model Qty. 15 & up
—V	187-265 VAC* 47-440 Hz	12%	12%	10%

No derating for 47 Hz operation.

*Add—V at the end of part number (LGS-FA-12-OV-R-V).

Accessories

Rack adaptors and chassis slides see page 68.

Guaranteed for 5 Years

5-year guarantee includes labor as well as parts. Guarantee applies to operation at full published specifications at end of 5 years.

Recognized ("D" option under evaluation).

CSA Certified (LGS-FA and "D" option under evaluation)

MODEL	SERIES			
	LGS 5A	LGS 6A	LGS-EEA	LGS FA
5 OV R	16.5	18.0	24.0	20.0
6 OV R	16.5	17.5	16.5	16.5
12 OV R	5.0	3.0	13.0	12.0
15 OV R	5.0	4.5	13.0	12.0
20 OV R	5.0	6.0	13.0	12.0
24 OV R	5.0	2.0	13.0	12.0
28 OV R	5.0	1.0	13.0	12.0
48 OV R	—	—	13.0	12.0

Hold-up times at 105 VAC, 60 Hz,
Max. output power

5 year guaranteed switching selector guide

AC input, single output fixed voltage
Models LR, LGA, LJ and LJA

MODEL	REGULATION (line, load)	RIPPLE (mV RMS)	MAX AMPS AT AMBIENT OF				COMPLETE ELECT. SPEC. PG	PKG. SIZE	DIMENSIONS (inches)	COMPLETE MECH. SPEC. PG	PRICE
			40°C	50°C	60°C	71°C					
5 VOLTS ±5% ADJ.											
LGS-5A-5-OV-R	0.1%, 0.1%	10	55.0	46.0	36.0	22.0	11	5	3-3/16 x 4-15/16 x 14-5/8	108	699
LGS-6A-5-OV-R	0.1%, 0.1%	10	90.0	83.0	73.0	57.0	11	6	3-3/16 x 7-1/2 x 15-1/8	108	943
LGS-EEA-5-OV-R	0.1%, 0.1%	10	150.0	135.0	116.0	96.0	11	EE	4-15/16 x 7-1/2 x 16-1/2	109	1178
LGS-FA-5-OV-R	0.1%, 0.1%	10	190.0	170.0	147.0	116.0	11	F	3-1/2 x 19 x 14	110	1981
6 VOLTS ±5% ADJ.											
LGS-5A-6-OV-R	0.1%, 0.1%	10	46.5	39.5	31.5	20.0	11	5	3-3/16 x 4-15/16 x 14-5/8	108	699
LGS-6A-6-OV-R	0.1%, 0.1%	10	80.0	73.0	65.0	51.0	11	6	3-3/16 x 7-1/2 x 15-1/8	108	943
LGS-EEA-6-OV-R	0.1%, 0.1%	10	135.0	122.0	104.0	86.0	11	EE	4-15/16 x 7-1/2 x 16-1/2	109	1178
LGS-FA-6-OV-R	0.1%, 0.1%	10	165.0	148.0	128.0	108.0	11	F	3-1/2 x 19 x 14	110	1981
12 VOLTS ±5% ADJ.											
LGS-5A-12-OV-R	0.1%, 0.1%	15	26.0	23.0	19.0	14.0	11	5	3-3/16 x 4-15/16 x 14-5/8	108	699
LGS-6A-12-OV-R	0.1%, 0.1%	15	45.0	41.0	36.0	29.0	11	6	3-3/16 x 7-1/2 x 15-1/8	108	943
LGS-EEA-12-OV-R	0.1%, 0.1%	15	81.0	73.0	63.0	51.0	11	EE	4-15/16 x 7-1/2 x 16-1/2	109	1178
LGS-FA-12-OV-R	0.1%, 0.1%	15	100.0	90.0	80.0	68.0	11	F	3-1/2 x 19 x 14	110	1981
15 VOLTS ±5% ADJ.											
LGS-5A-15-OV-R	0.1%, 0.1%	15	22.0	19.2	16.0	12.0	11	5	3-3/16 x 4-15/16 x 14-5/8	108	699
LGS-6A-15-OV-R	0.1%, 0.1%	15	39.0	36.0	32.0	25.0	11	6	3-3/16 x 7-1/2 x 15-1/8	108	943
LGS-EEA-15-OV-R	0.1%, 0.1%	15	65.0	59.0	51.0	41.0	11	EE	4-15/16 x 7-1/2 x 16-1/2	109	1178
LGS-FA-15-OV-R	0.1%, 0.1%	15	81.0	73.0	65.0	55.0	11	F	3-1/2 x 19 x 14	110	1981

5-year guaranteed switching selector guide

AC input, single output fixed voltage
Models LR, LGA, LJ and LJA

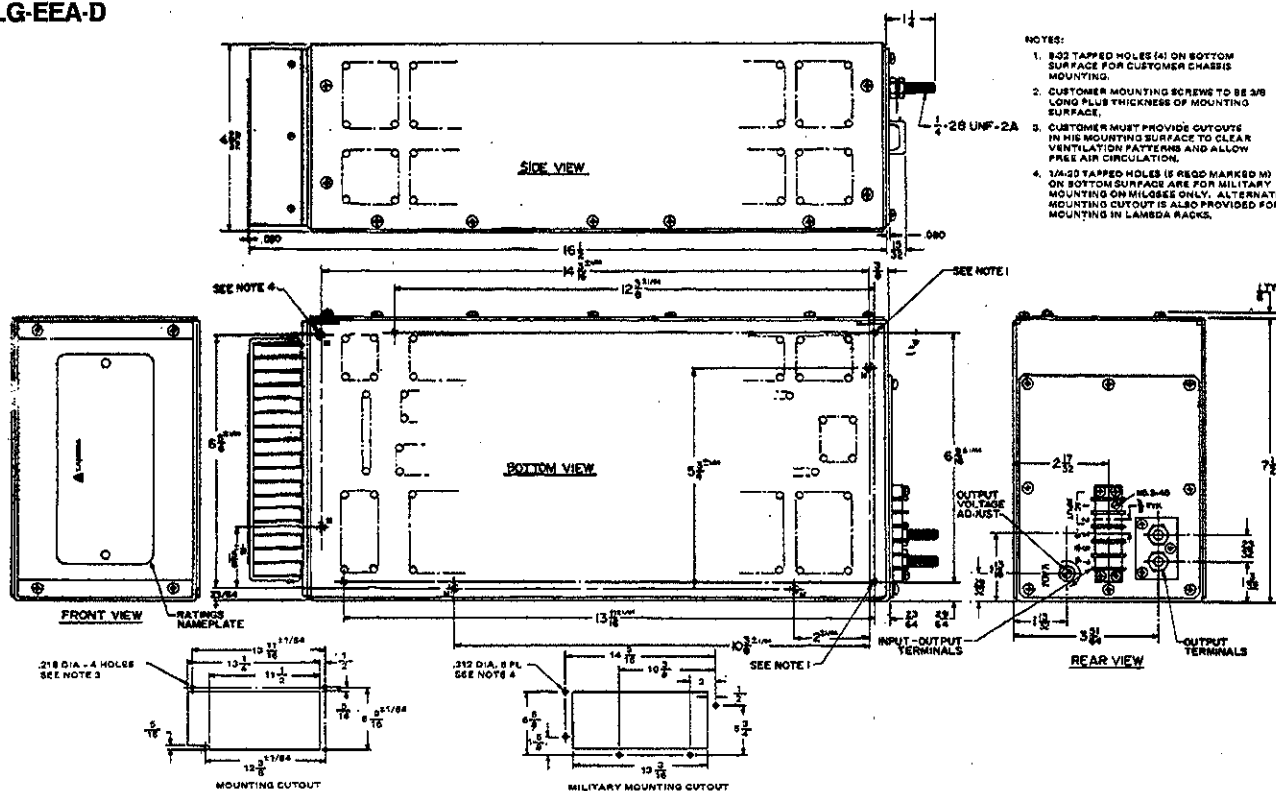
MODEL	REGULATION (line, load)	RIPPLE (mV RMS)	MAX AMPS AT AMBIENT OF				COMPLETE ELECT. SPEC. PG.	PKG. SIZE	DIMENSIONS (inches)	COMPLETE MECH. SPEC. PG	PRICE
20 VOLTS $\pm 5\%$ ADJ.											
LGS-5A-20-OV-R	0.1%, 0.1%	15	15.5	14.0	12.0	8.5	11	5	3-3/16 x 4-15/16 x 14-5/8	108	699
LGS-6A-20-OV-R	0.1%, 0.1%	15	30.5	27.5	24.3	19.0	11	6	3-3/16 x 7-1/2 x 15-1/8	108	943
24 VOLTS $\pm 5\%$ ADJ.											
LGS-5A-24-OV-R	0.1%, 0.1%	15	13.5	12.5	10.5	7.5	11	5	3-3/16 x 4-15/16 x 14-5/8	108	699
LGS-6A-24-OV-R	0.1%, 0.1%	15	26.0	23.5	20.5	16.0	11	6	3-3/16 x 7-1/2 x 15-1/8	108	943
LGS-EEA-24-OV-R	0.1%, 0.1%	15	40.0	36.0	31.0	26.0	11	EE	4-15/16 x 7-1/2 x 16-1/2	109	1178
LGS-FA-24-OV-R	0.1%, 0.1%	15	52.0	47.0	42.0	35.0	11	F	3-1/2 x 19 x 14	110	1981
28 VOLTS $\pm 5\%$ ADJ.											
LGS-5A-28-OV-R	0.1%, 0.1%	15	11.5	10.5	9.5	6.8	11	5	3-3/16 x 4-15/16 x 14-5/8	108	699
LGS-6A-28-OV-R	0.1%, 0.1%	15	22.5	20.5	18.0	14.0	11	6	3-3/16 x 7-1/2 x 15-1/8	108	943
LGS-EEA-28-OV-R	0.1%, 0.1%	15	35.0	32.0	27.0	22.0	11	EE	4-15/16 x 7-1/2 x 16-1/2	109	1178
LGS-FA-28-OV-R	0.1%, 0.1%	15	46.0	42.0	37.0	31.0	11	F	3-1/2 x 19 x 14	110	1981
48 VOLTS $\pm 5\%$ ADJ.											
LGS-EEA-48-OV-R	0.1%, 0.1%	35	20.0	18.0	15.5	12.5	11	EE	4-15/16 x 7-1/2 x 16-1/2	109	1231
LGS-FA-48-OV-R	0.1%, 0.1%	35	26.0	23.0	20.0	17.0	11	F	3-1/2 x 19 x 14	110	2062

PART IV—DIMENSIONAL DRAWINGS

MODULAR POWER SUPPLIES

LG-EEA-D AND OV'S

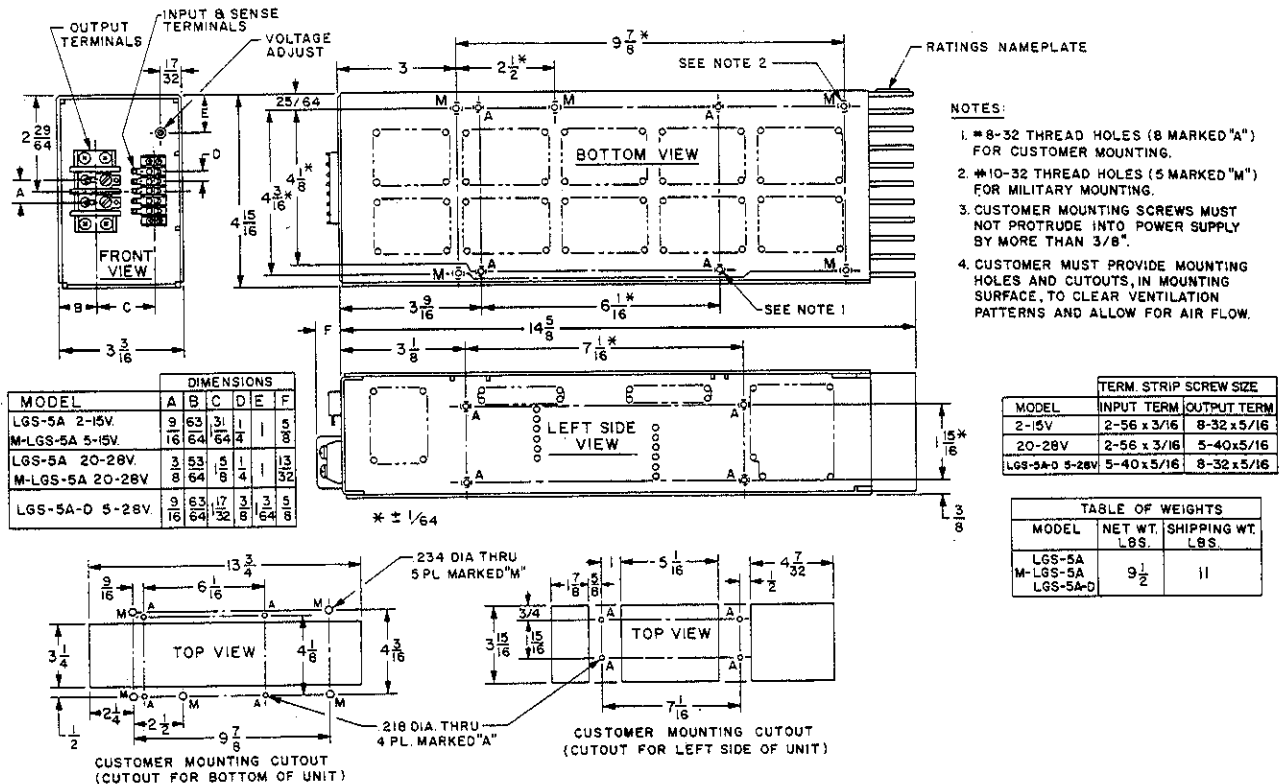
LG-EEA-D



PART IV—DIMENSIONAL DRAWINGS

MODULAR SUPPLIES PACKAGE SIZES 5, 5A, 6 AND 6A

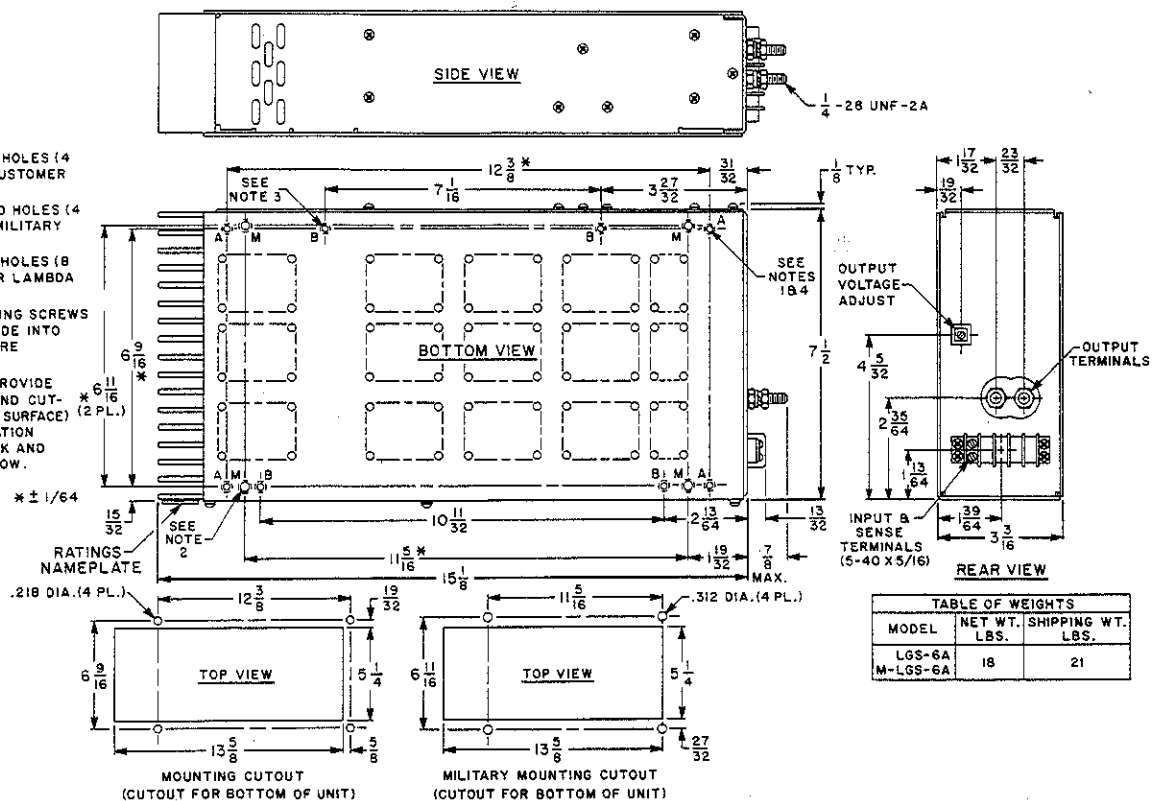
LG-5A Series LG-5 Series



LG-6A Series LG-6 Series

NOTES:

1. #8-32 THREAD HOLES (4 MARKED "A") FOR CUSTOMER MOUNTING.
2. #1/4-20 THREAD HOLES (4 MARKED "M") FOR MILITARY MOUNTING.
3. #8-32 THREAD HOLES (8 MARKED "A&B") FOR LAMBDA RACK ADAPTER.
4. CUSTOMER MOUNTING SCREWS MUST NOT PROTRUDE INTO POWER SUPPLY MORE THAN 3/8".
5. CUSTOMER MUST PROVIDE MOUNTING HOLES AND CUTOUPS (IN MOUNTING SURFACE) TO CLEAR VENTILATION PATTERNS, HEATSINK AND ALLOW FOR AIR FLOW.



PART IV—DIMENSIONAL DRAWINGS

MODULAR SUPPLIES MLG, MLGA and LGA SERIES

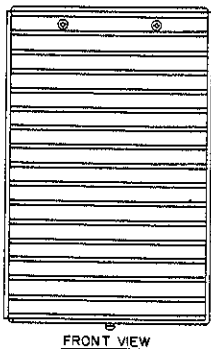
PACKAGE SIZE EEA

LGA-EEA Series

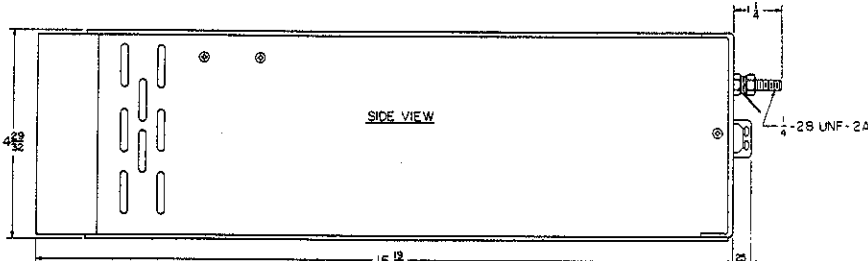
NOTES:

1. 8-32 HOLES (4) ON BOTTOM SURFACE FOR CUSTOMER CHASSIS MOUNTING.
2. CUSTOMER MOUNTING SCREWS TO BE 3/8 LONG PLUS THICKNESS OF MOUNTING SURFACE.
3. CUSTOMER MUST PROVIDE CUTOUTS IN HIS MOUNTING SURFACE TO CLEAR VENTILATION PATTERNS AND ALLOW FREE AIR CIRCULATION.
4. 1/4-20 HOLES (4 REQ'D MARKED "M") ON BOTTOM SURFACE ARE FOR MILITARY MOUNTING ON MLG/EEA ONLY. ALTERNATE MOUNTING CUTOUT IS ALSO PROVIDED FOR MOUNTING IN LAMBDA RACKS.

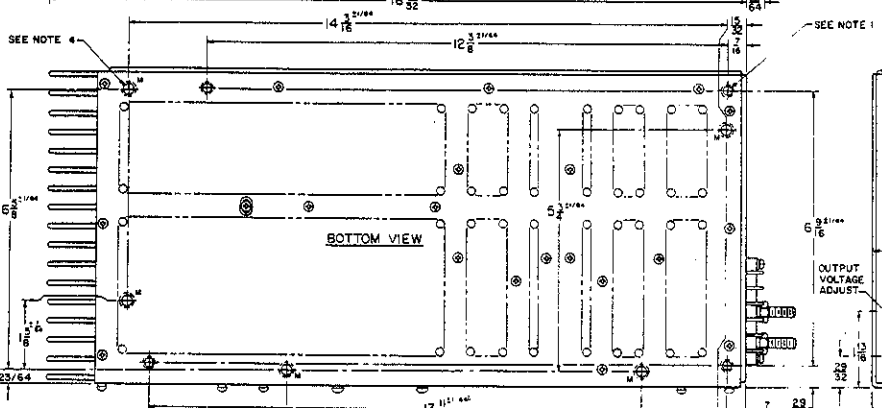
MODEL	NET (LBS)	SHIPPING (LBS)
LGA-EEA	28	31
M-LGSEEA	28	30



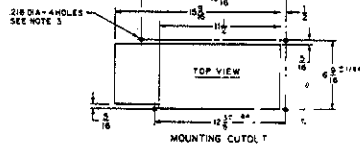
FRONT VIEW



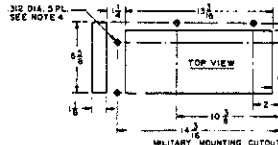
SIDE VIEW



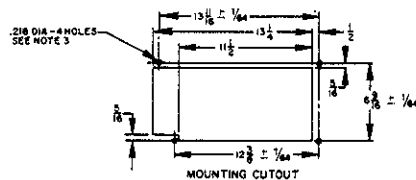
BOTTOM VIEW



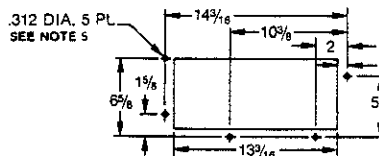
TOP VIEW



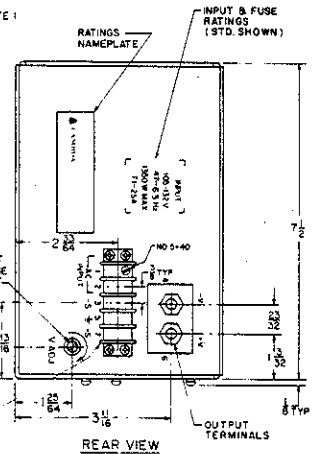
TOP VIEW



MOUNTING CUTOUT



MILITARY MOUNTING CUTOUT



REAR VIEW

NOTES:

1. 8-32 TAPPED HOLES (4) ON BOTTOM SURFACE FOR CUSTOMER CHASSIS MOUNTING.
2. CUSTOMER MOUNTING SCREWS TO BE 3/8 LONG PLUS THICKNESS OF MOUNTING SURFACE.
3. CUSTOMER MUST PROVIDE CUTOUTS IN HIS MOUNTING SURFACE TO CLEAR VENTILATION PATTERNS AND ALLOW FREE AIR CIRCULATION.
4. TERMINAL STRIP SCREW SIZE 5-40 X 1/4
5. 1/4-20 TAPPED HOLES (4 REQ'D MARKED "M") ON BOTTOM SURFACE ARE FOR MILITARY MOUNTING (MLGS-EEA). ALTERNATE MOUNTING CUTOUT IS ALSO PROVIDED FOR MOUNTING IN LAMBDA RACKS.

PART IV—DIMENSIONAL DRAWINGS

LGS-FA POWER SUPPLIES

LGS-F A Series

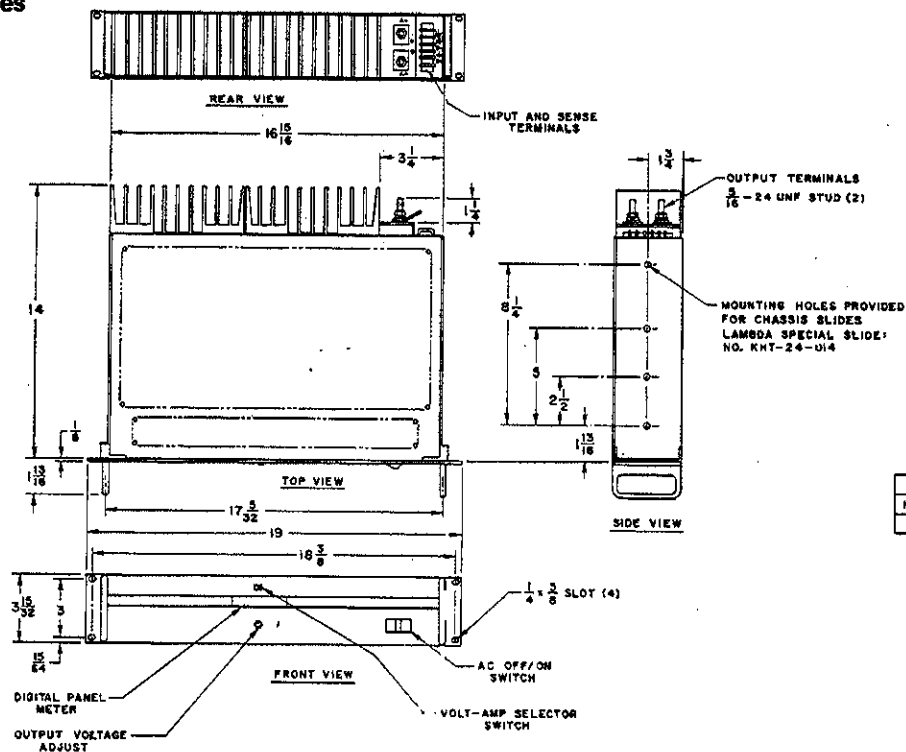


TABLE OF WEIGHT	
NET (LBS)	SHIPPING (LBS)
34 1/2	44