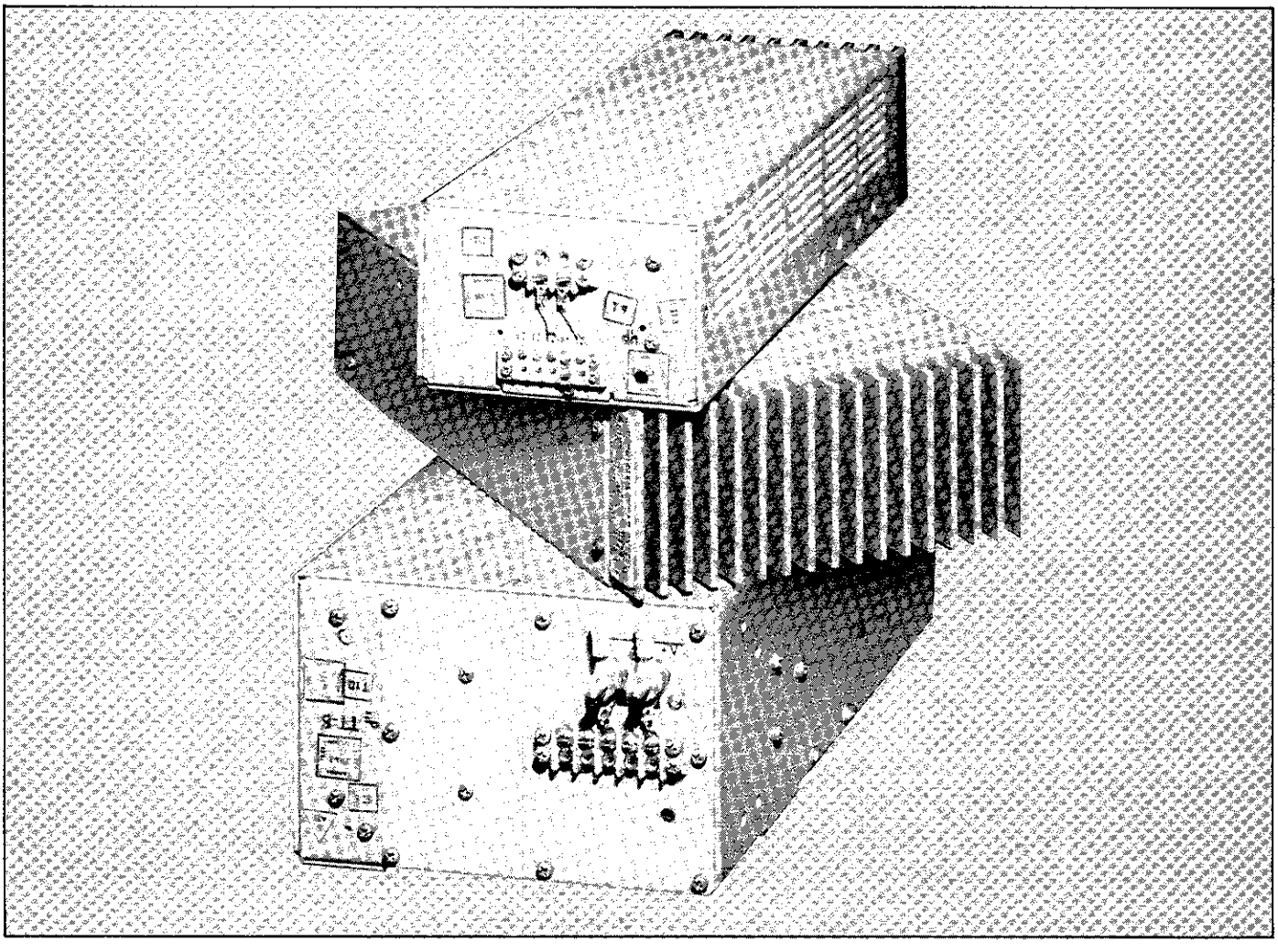
5 YEAR GUARANTEED SWITCHING

Lambda MLGA series



Features—MLGA series

5-year guaranteed switching power supplies

3 package sizes, up to 150A, up to 28 volts

Lambda MIL-T-27D grade 5 magnetics, vacuum impregnated varnished layer wound with electrostatic shield, Class H, 180°C, UL approved

Lambda CC4® Printed Circuit Board
plated thru-holes fungus inert, flame retardant
*Licensee of Photo Circuits Inc.

Sealed thermostat and pots

Hermetically sealed semiconductors

Convection cooled, no fans, or blowers needed

Lambda integrated control circuit

Lambda manufactured heavy-duty steel chassis

Chassis designed for easy servicing

MIL-R-26 type wire wound resistors

Computer grade hermetically sealed 10-year life electrolytic capacitor

Lambda overvoltage protector crowbars output and shuts down inverter

MIL-W-16878 Wire UL approved

Available with 110/208/230 VAC (EE Package only)

Ⓡ Recognized

Specifications—MLGA Series

DC Output
Voltage range shown in tables.

Regulated Voltage
regulation, line .....0.1% for 105 to 132 VAC,
(187-265 VAC on MLGS-EEA).

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

remote programming
resistance .....1000 ohms/volt
remote programming
voltage ..... volt per volt
Temperature
Coefficient ..... 0.03% per °C

AC Input
line .....105-132 VAC; 47-440 Hz
power .....450 watts max at 0.6 P.F. for MLGS-5A
970 watts max at 0.7 P.F. for MLGS-6A
1350 watts max at 0.6 P.F. for MLGS-EEA

DC Input .....145 VDC ± 10%, MLGS-5A, 6A packages only.
Efficiency .....64% minimum

Soft-start Circuit: (MLGS-6A, MLGS-EEA)
Limits in-rush current at turn-on.

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

Ambient Operating Temperature
Continuous duty 0° to 71°C.

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

Overload Protection
ELECTRICAL
Electronic current limiting pre-set at factory.

THERMAL
By self-resetting thermostat.

Overvoltage Protection
Built-in fixed overvoltage protection 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 (MIL-STD-461 with Sprague filter) and FCC docket 20780 class A.

COOLING
Convection cooled.

DC Output Controls
Simple screwdriver voltage adjustment over the voltage range.

Input and Output Connections
By heavy duty barrier strip; heavy duty studs on MLGS-6A, and EEA.

Mounting
Two mounting surfaces, three mounting positions for MLGS-5A. One mounting position for MLGS-6A, and EEA.

Power Failure
See graph on standard LG units for hold-up time vs. load current on all units. Hold-up time is guaranteed at full load maximum output voltage and low line.

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 MLGS 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 & II.
7) Fungus—Method 508.1, Procedure I.
8) Salt Fog—Mil-E-16400 ¶3.3.5.4.2 Naval sheltered environment
9) Sand & Dust—Method 510.1, Procedure I
10) Explosive Atmosphere—Method 511.1, Procedure I.
11) Vibration—Method 514.2, Procedure VIII, X & XI.
12) Shock—Method 516.2, Procedure I, III & V.
13) Temperature-Humidity-Altitude—Method 518.1, Procedure I.

MIL-I-6181D—Conducted only.
MIL-S-901C—High shock-grade A, Class I, Type A.
MIL-STD-167—Vibration, Type I.

Physical Data

Package Model	Weight Lbs. Net	Weight Lbs. Ship	Size Inches
MLGS-5A	13-1/2	15	3-3/16 x 4-15/16 x 14-5/8
MLGS-6A	20	23	3 3/16 x 7-1/2 x 15-1/8
MLGS-EEA	26	31	4-15/16 x 7-1/2 x 16-1/2

Options MLGS-EEA only

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

Consult factory for derating, if any.

Accessories
Rack adapters see page 105.

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

CSA—Under Evaluation

5-year guaranteed switching selector guide.

AC input, single output, fixed voltage models. MLGA Series 105-132 VAC Standard.

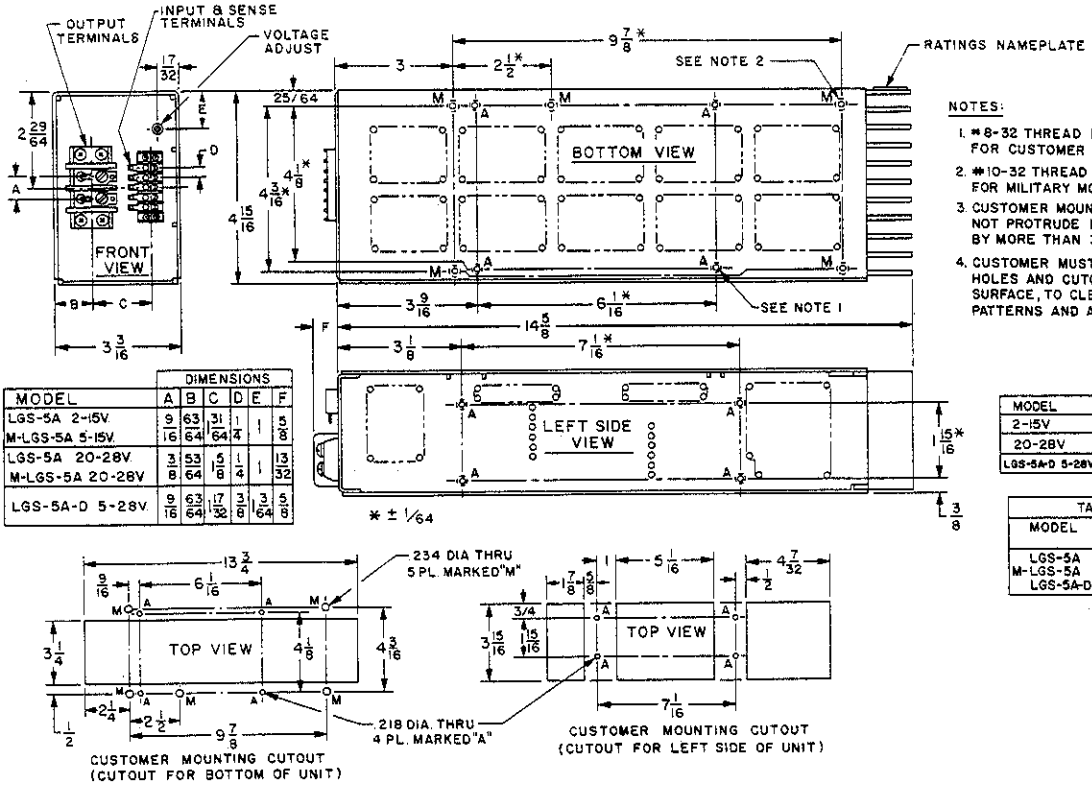
MODEL	REGULATION (line, load)	RIPPLE mV (RMS)	MAX AMPS AT AMBIENT OF 40°C	50°C	60°C	71°C	PKG. SIZE	DESCRIPTION	COMP. MECH. PG.	PRICE
5 VOLTS ±5% ADJ										
MLGS-5A-5-OV	0.1%, 0.1%	10	55.0	46.0	36.0	22.0	5	3-3/16 x 4-15/16 x 14-5/8	101	$1122
MLGS-6A-5-OV	0.1%, 0.1%	10	90.0	83.0	73.0	57.0	6	3-3/16 x 7-1/2 x 15-1/8	101	1507
MLGS-EEA-5-OV	0.1%, 0.1%	10	150.0	135.0	116.0	96.0	EE	4-15/16 x 7-1/2 x 16-1/2	102	1830
6 VOLTS ±5% ADJ										
MLGS-5A-6-OV	0.1%, 0.1%	10	46.5	39.5	31.5	20.0	5	3-3/16 x 4-15/16 x 14-5/8	101	1122
MLGS-6A-6-OV	0.1%, 0.1%	10	80.0	73.0	65.0	51.0	6	3-3/16 x 7-1/2 x 15-1/8	101	1507
MLGS-EEA-6-OV	0.1%, 0.1%	10	135.0	122.0	104.0	86.0	EE	4-15/16 x 7-1/2 x 16-1/2	102	1830
12 VOLTS ±5% ADJ										
MLGS-5A-12-OV	0.1%, 0.1%	15	26.0	23.0	10.9	14.0	5	3-3/16 x 4-15/16 x 14-5/8	101	1122
MLGS-6A-12-OV	0.1%, 0.1%	15	45.0	41.0	36.0	29.0	6	3-3/16 x 7-1/2 x 15-1/8	101	1507
MLGS-EEA-12-OV	0.1%, 0.1%	15	81.0	73.0	63.0	51.0	EE	4-15/16 x 7-1/2 x 16-1/2	102	1830
15 VOLTS ±5% ADJ										
MLGS-5A-15-OV	0.1%, 0.1%	15	22.0	19.2	16.0	12.0	5	3-3/16 x 4-15/16 x 14-5/8	101	1122
MLGS-6A-15-OV	0.1%, 0.1%	15	39.0	36.0	32.0	25.0	6	3-3/16 x 7-1/2 x 15-1/8	101	1507
MLGS-EEA-15-OV	0.1%, 0.1%	15	65.0	59.0	51.0	41.0	EE	4-15/16 x 7-1/2 x 16-1/2	102	1830
20 VOLTS ±5% ADJ										
MLGS-5A-20-OV	0.1%, 0.1%	15	15.5	14.0	12.0	8.50	5	3-3/16 x 4-15/16 x 14-5/8	101	1122
MLGS-6A-20-OV	0.1%, 0.1%	15	30.5	27.5	24.3	19.0	6	3-3/16 x 7-1/2 x 15-1/8	101	1507
MLGS-EEA-20-OV	0.1%, 0.1%	15	47.0	42.5	36.5	30.0	EE	4-15/16 x 7-1/2 x 16-1/2	102	1830
24 VOLTS ±5% ADJ										
MLGS-5A-24-OV	0.1%, 0.1%	15	13.5	12.5	10.5	7.5	5	3-3/16 x 4-15/16 x 14-5/8	101	1122
MLGS-6A-24-OV	0.1%, 0.1%	15	26.0	23.5	20.5	16.0	6	3-3/16 x 7-1/2 x 15-1/8	101	1507
MLGS-EEA-24-OV	0.1%, 0.1%	15	40.0	36.0	31.0	26.0	EE	4-15/16 x 7-1/2 x 16-1/2	102	1830
28 VOLTS ±5% ADJ										
MLGS-5A-28-OV	0.1%, 0.1%	15	11.5	10.5	9.5	6.8	5	3-3/16 x 4-15/16 x 14-5/8	101	1122
MLGS-6A-28-OV	0.1%, 0.1%	15	22.5	20.5	18.0	14.0	6	3-3/16 x 7-1/2 x 15-1/8	101	1507
MLGS-EEA-28-OV	0.1%, 0.1%	15	35.0	32.0	27.0	22.0	EE	4-15/16 x 7-1/2 x 16-1/2	102	1830

MLGA Series meets these MIL Standards.

MILITARY SPECIFICATION	STANDARD MLG SERIES MEETS:
MIL-STD-810C Low Pressure	Method 500.1 Proc. I
MIL-STD-810C High Temp.	Method 501.1 Proc. I, II
MIL-STD-810C Low Temp.	Method 502.1 Proc. I
MIL-STD-810C Temp. Shock	Method 503.1 Proc. I
MIL-STD-810C Temp. Alt.	Method 504.1 Proc. I Class 2 (0°C operating)
MIL-STD-810C Humidity	Method 507.1 Proc I, II
MIL-STD-810C Fungus	Method 508.1 Proc. I
MIL-E-16400 Salt Fog	¶3.3.5.4.2 Naval Sheltered Environment
MIL-STD-810C Sand & Dust	Method 510.1 Proc. I
MIL-STD-810C Explosive Atmosphere	Method 511.1 Proc. I
MIL-STD-810C Vibration	Method 514.2 Proc. VIII, X, XI
MIL-STD-810C Shock	Method 516.2 Proc. I, III, V
MIL-STD-810C Temp.-Humidity-Alt.	Method 518.1 Proc. I
MIL-S-901C High Shock	Grade A, Class 1, Type A
MIL-I-6181D RFI Conducted	Yes
MIL-STD-461 RFI Conducted	Yes—with external filter
MIL-T-27C Transformer	Grade 5
MIL-STD-167 Vibration	Type I
MIL-STD-1399 Voltage Transient	Type III Power

PART IV—DIMENSIONAL DRAWINGS
MODULAR SUPPLIES PACKAGE SIZES 5, 5A, 6 AND 6A

MLG-5A Series



NOTES:

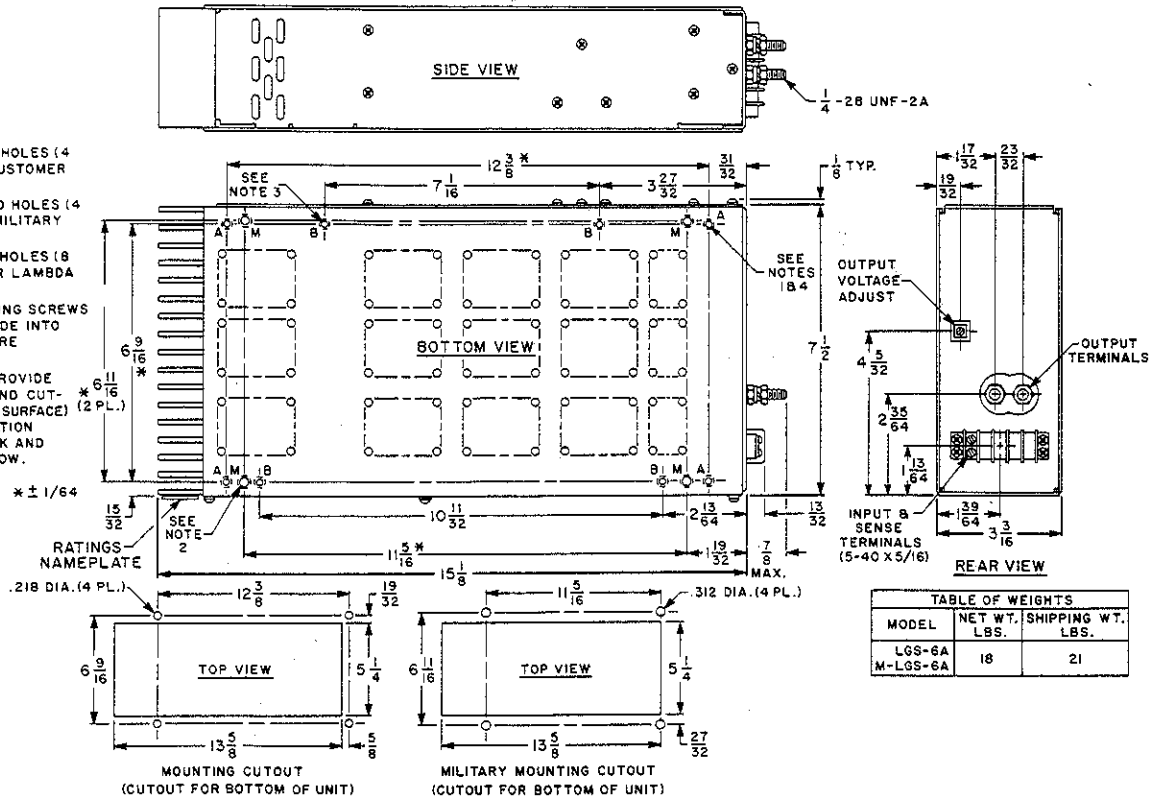
1. # 8-32 THREAD HOLES (8 MARKED "A") FOR CUSTOMER MOUNTING.
2. # 10-32 THREAD HOLES (5 MARKED "M") FOR MILITARY MOUNTING.
3. CUSTOMER MOUNTING SCREWS MUST NOT PROTRUDE INTO POWER SUPPLY BY MORE THAN 3/8".
4. CUSTOMER MUST PROVIDE MOUNTING HOLES AND CUTOUTS, IN MOUNTING SURFACE, TO CLEAR VENTILATION PATTERNS AND ALLOW FOR AIR FLOW.

MODEL	DIMENSIONS A	B	C	D	E	F
LGS-5A 2-15V M-LGS-5A 5-15V	9/16	63/64	31/64	1 1/4	1	5/8
LGS-5A 20-28V M-LGS-5A 20-28V	3/8	53/64	1 5/8	1 1/4	1	13/32
LGS-5A-D 5-28V	9/16	63/64	17/32	3/8	3/64	5/8

MODEL	TERM. STRIP SCREW SIZE INPUT TERM	OUTPUT TERM
2-15V	2-56 x 3/16	8-32 x 5/16
20-28V	2-56 x 3/16	5-40 x 5/16
LGS-5A-D 5-28V	5-40 x 5/16	8-32 x 5/16

TABLE OF WEIGHTS MODEL	NET WT. LBS.	SHIPPING WT. LBS.
LGS-5A M-LGS-5A LGS-5A-D	9 1/2	11

MLG-6A Series



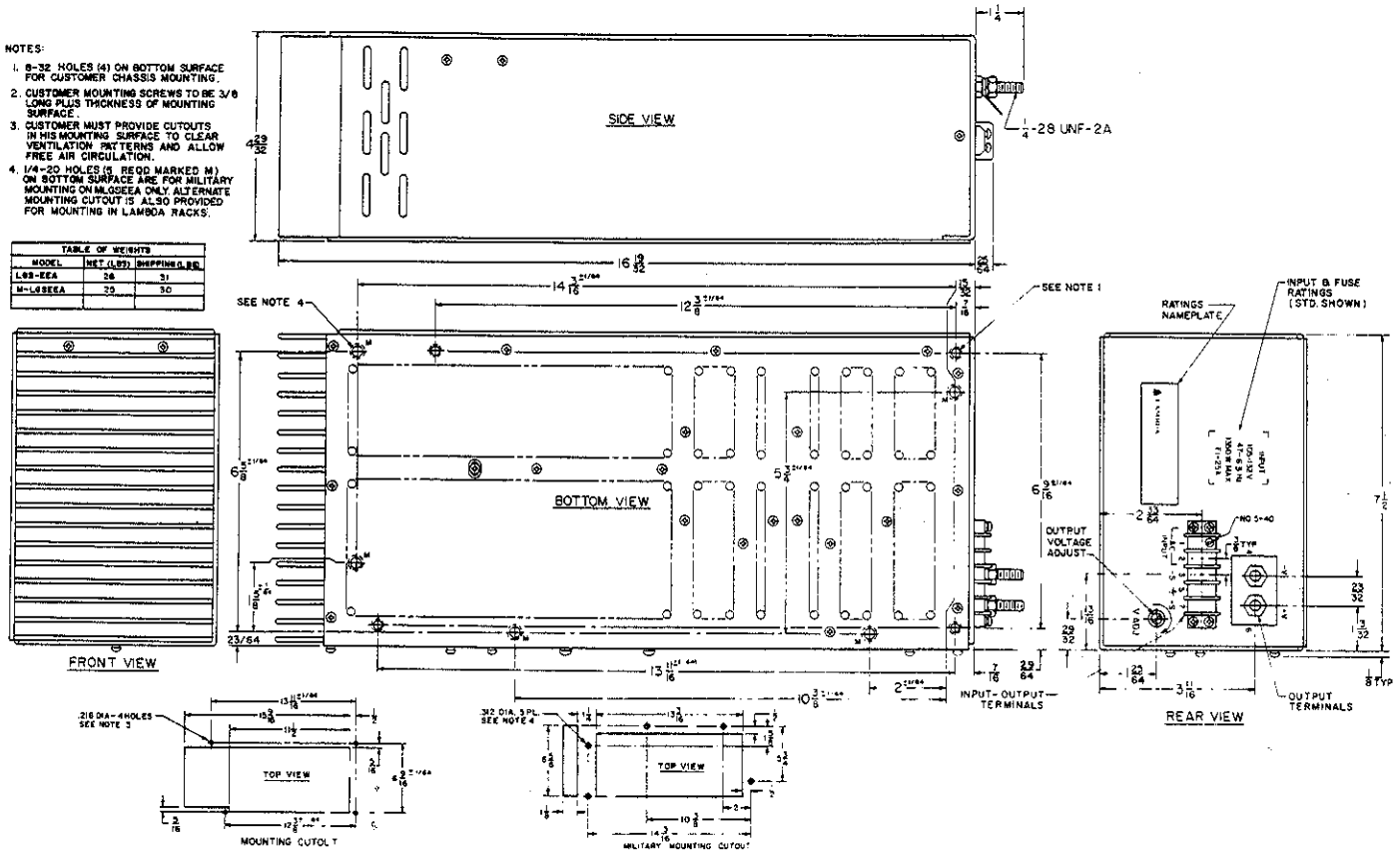
NOTES:

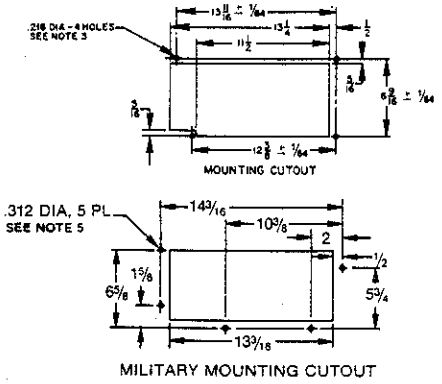
1. # 8-32 THREADED HOLES (4 MARKED "A") FOR CUSTOMER MOUNTING.
2. # 1/4-20 THREADED HOLES (4 MARKED "M") FOR MILITARY MOUNTING.
3. # 8-32 THREADED HOLES (8 MARKED "A & B") FOR LAMBDA RACK ADAPTER.
4. CUSTOMER MOUNTING SCREWS MUST NOT PROTRUDE INTO POWER SUPPLY MORE THAN 3/8".
5. CUSTOMER MUST PROVIDE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

TABLE OF WEIGHTS MODEL	NET WT. LBS.	SHIPPING WT. LBS.
LGS-6A M-LGS-6A	18	21

PART IV—DIMENSIONAL DRAWINGS MODULAR SUPPLIES MLG, MLGA and LGA SERIES PACKAGE SIZE EEA

MLGA-EEA Series





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 OUTPUT IS ALSO PROVIDED FOR MOUNTING IN LAMBDA RACKS.**