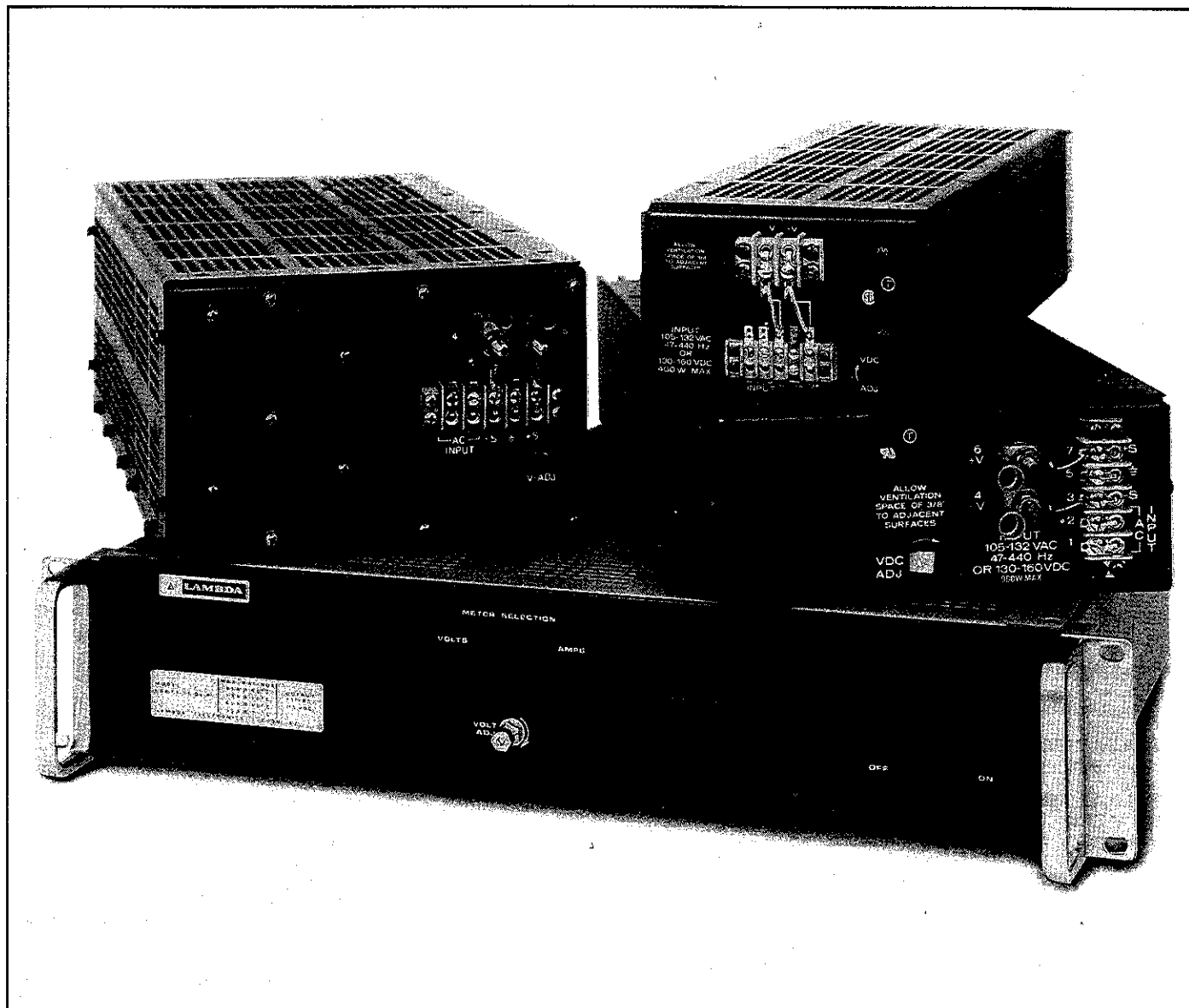


PART 1A—AC-TO-DC SWITCHING POWER SUPPLIES

LAMBDA'S MIL-ENVIRONMENT LGA SERIES



FOR DEMANDING MEDIUM AND HIGH POWER APPLICATIONS

- All models are ruggedized to MIL-STD-810 Environmental Conditions. The LGA Series uses Lambda MIL-T-27 Grade 6 magnetics, only hermetically sealed semiconductors, computer-grade hermetically sealed 10-year life electrolytic capacitors and other MIL and MIL-type components. They are the ideal choice for demanding military and industrial applications where exposure to harsh environmental extremes is a possibility.
- All models are UL recognized and CSA certified, thereby minimizing the problems associated with end-user equipment certification.
- Lambda guarantees each unit will meet or exceed all published specifications for the full 5 year guarantee period.
- Convection Cooled. No fans or blowers required.
- Available in four package sizes, from 275W to 1000W, up to 48V, up to 190A. The LGA Series covers your demanding requirements in the medium to high power ranges.
- Meets FCC Docket 20780 Class A, and MIL-I-6181D. Built in filtering allows the unit to be used in military and industrial equipment without using external filters to protect sensitive adjacent equipment.
- Grade 1 design.

PART IA—AC-TO-DC SWITCHING POWER SUPPLIES

LAMBDA'S MIL-ENVIRONMENT LGA SERIES

DC OUTPUT

Voltage range shown in tables.

REGULATED VOLTAGE

regulation, line	0.1% from 105 to 132VAC (187 to 265VAC on LGS-EEA, FA "V" option models).
regulation, load	0.1% for 0 to full load.
ripple and noise (20MHz Bandwidth)	10mV RMS, 35mV pk-pk for 5V and 6V units 15mV RMS, 100mV pk-pk for 12V through 28V units. 35mV RMS, 150mV pk-pk for 48V units.
temperature coefficient	0.03%/°C.
remote programming resistance	1000 ohms/volt nominal.
remote programming voltage	volt per volt.

AC INPUT

line	105 to 132VAC; 47-440Hz (For FA and EEA models derate 10% for operation below 57Hz).
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

145VDC \pm 10%. LGS-5A, LGS-6A packages only.

EFFICIENCY

64% minimum except LGS-FA which is 70% minimum.

OPERATING TEMPERATURE RANGE

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.

COOLING

Convection cooled.

IN-RUSH LIMITING

(LGS-6A, LGS-EEA, LGS-FA only.) Limits in-rush current at turn-on.

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, EEA, and FA.

HOLD UP TIME

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

REMOTE SENSING

Provision is made for remote sensing to eliminate the 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, Procedures 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, Procedures X & XI.
- 9) Shock—Method 516.2, Procedures I & III.

*5A, 6A and EEA packages only.

EMI

Conducted and radiated EMI conforms to MIL-I-6181D with one output terminal grounded and FCC docket 20780 Class A.

PHYSICAL DATA

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

OPTIONS

AC INPUT (LGS-EEA only)

Add ¹ Suffix	For Operation at:	Price
-V	187 to 265VAC 47-440Hz	20%

No derating for 47Hz operation.

¹Add -V at the end of part number (LGS-EEA-12-OV-R-V).

ACCESSORIES

For rack adapters and other accessories see Part IV of this catalog.

GUARANTEED FOR 5 YEARS

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

UL/CSA

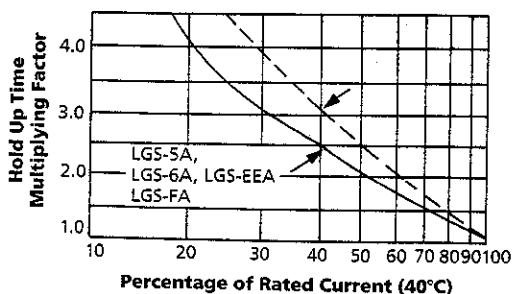
UL recognized. All models are CSA certified except for LGS-5A and V option models. Consult factory.

Hold Up Time At Full Load

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 in Milliseconds at 105VAC, 60Hz Input, Max. Output Power

Hold Up Time Multiplying Factors



PART IA—AC-TO-DC SWITCHING POWER SUPPLIES

MIL-ENVIRONMENT SWITCHING SELECTOR GUIDE

Fixed Voltage. Single Output.

MAX CURRENT AT OPERATING TEMPERATURE OF				COMPLETE ELEC. SPEC. PG.	COMPLETE MECH. SPEC. PG.	DIMENSIONS (inches)	LAMBDA'S CHOICE (Δ)*	QTY. 1	PRICE QTY. 10	QTY. 25	MODEL
40°C	50°C	60°C	71°C								
5V ± 5% ADJ.											
90.0	83.0	73.0	57.0	15	152	3 ³ / ₁₆ × 7 ¹ / ₂ × 15 ¹ / ₈	—	1725	1643	1577	LGS-6A-5-OV-R
150.0	135.0	116.0	96.0	15	152	4 ¹³ / ₁₆ × 7 ¹ / ₂ × 16 ¹ / ₂	—	2134	2033	1951	LGS-EEA-5-OV-R
28V ± 5% ADJ.											
22.5	20.5	18.0	14.0	15	152	3 ³ / ₁₆ × 7 ¹ / ₂ × 15 ¹ / ₈	—	1725	1643	1577	LGS-6A-28-OV-R
35.0	32.0	27.0	22.0	15	152	4 ¹³ / ₁₆ × 7 ¹ / ₂ × 16 ¹ / ₂	—	2134	2033	1951	LGS-EEA-28-OV-R

*LAMBDA'S RECOMMENDED CHOICE FOR NEW DESIGN REQUIREMENTS.

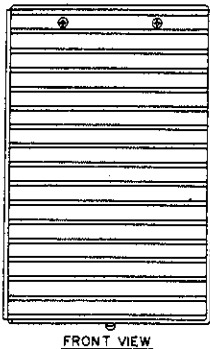
PART V—MECHANICAL DRAWINGS

LGS-EEA AND LGS-6A, MLGS-5A AND MLGS-6A

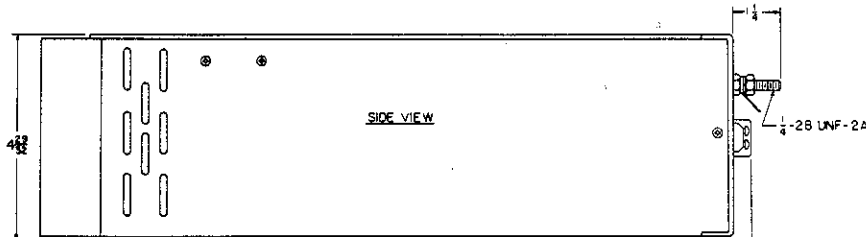
LGS-EEA Series

- 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 (5 REQ'D) MARKED "M" ON BOTTOM SURFACE ARE FOR MILITARY MOUNTING (MLGS-EEA). ALTERNATE MOUNTING OUTPUT IS ALSO PROVIDED FOR MOUNTING IN LAMBDA RACKS.

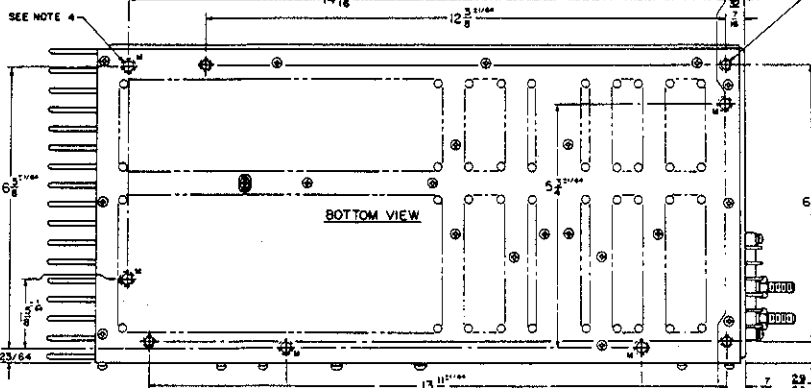
MODEL	NET (LBS.)	SHIPPING (LBS.)
LGS-EEA	18	21
M-LAMBA	25	30



FRONT VIEW



SIDE VIEW



BOTTOM VIEW

218 DIA. HOLES
SEE NOTE 3

15 1/16

11 1/8

12 3/8

6 3/16

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