

TDK-Lambda LRS-54-24

AC/DC Switching Power Supply



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\$250.00

In Stock

Qty Available: 1

Used and in Excellent Condition

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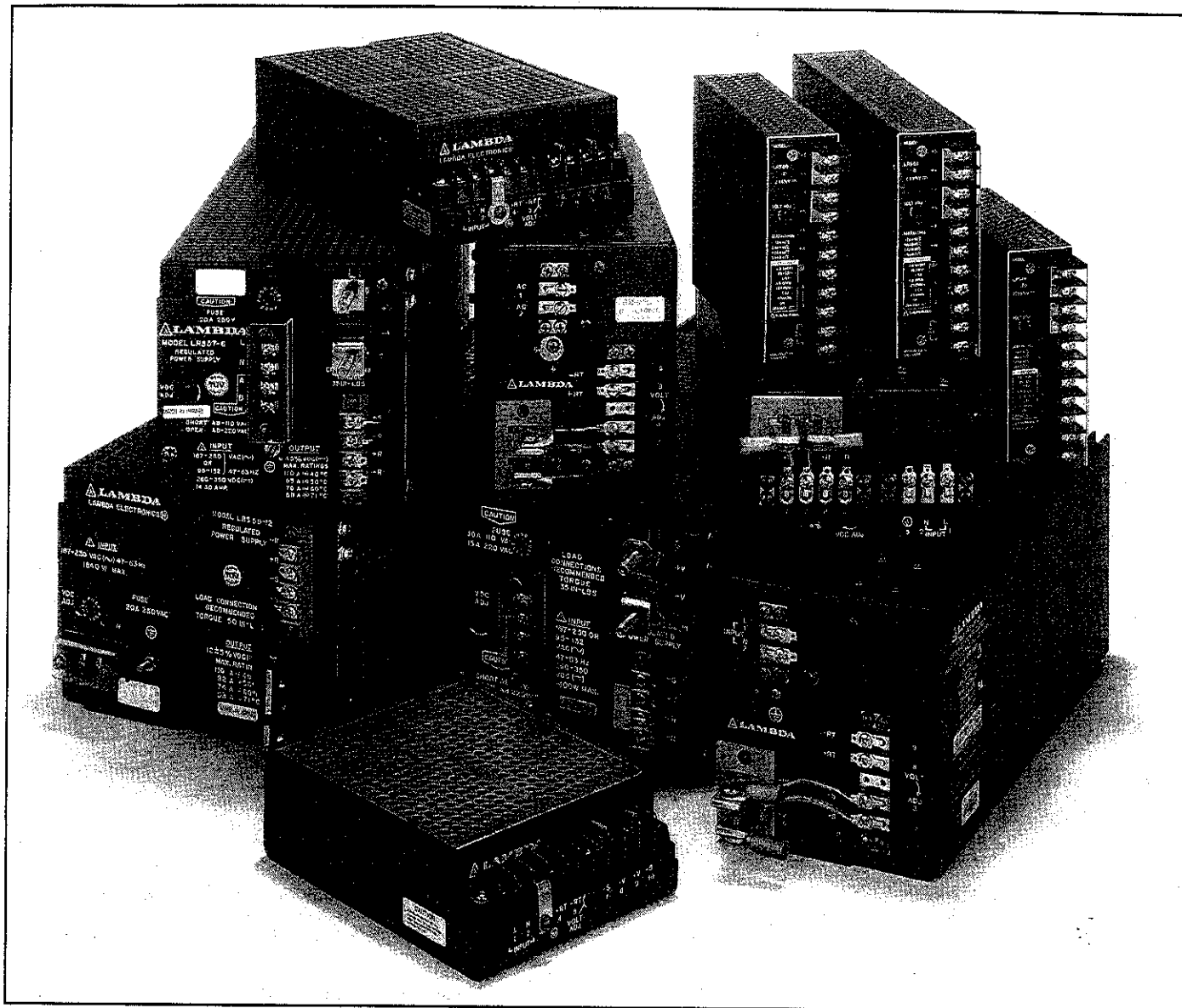
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PART 1A—AC-TO-DC SWITCHING POWER SUPPLIES

LAMBDA'S MIL-ENVIRONMENT LR SERIES



POWER SOLUTIONS FOR RUGGED, LOW NOISE ENVIRONMENTS

- Passed environmental tests in accordance with MIL-STD-810C.
 - Low Pressure — Method 500.1, Proc. I.
 - High Temperature — Method 501.1, Proc. I & II.
 - Low Temperature — Method 502.1, Proc. I.
 - Temperature Shock — Method 503.1, Proc. I.
 - Temperature Altitude — Method 504.1, Proc. I
 - Class 2 (–10°C operating).
 - Humidity — Method 507.1, Proc. I.
 - Fungus Proofing — Method 508.1, Proc. I.
 - Vibration — Method 514.2 Proc. X & XI.
 - Shock — Method 516.2, Proc. I & III.
 - Conducted Interference — MIL-STD-461A Notice 4 CE04.
- MIL-SPEC construction components, ratings and mounting methods rigidly specified by Lambda.
- 0.995 power factor and harmonic correction per IEC 555-2 when used in conjunction with Lambda's new PFHC-2600.
- Conducted EMI Conforms to FCC Docket 20780, Class A, MIL-STD-461A and VDE 0871 Class A.
- Up to 3.3W/in³.
- MRS Series DC output filter option reduces output ripple and noise to less than 4mV.
- Quality assurance procedure similar to MIL-I-45208, referenced to MIL-Q-9858A.
- Grade 1 design.

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								
2V ±5% ADJ.											
4.0	3.2	2.4	2.0	11	149	1 1/2 × 4 17/32 × 4 23/32	Δ	\$ 182	\$ 174	\$ 166	LRS-49-2
7.0	5.6	4.2	3.5	11	149	1 1/2 × 4 17/32 × 5 15/32	Δ	229	219	209	LRS-50-2
12.0	9.6	7.2	6.0	11	149	1 11/16 × 4 17/32 × 7 13/64	Δ	290	276	265	LRS-51-2
15.0	13.7	11.1	5.9	11	150	2 × 4 7/8 × 6 1/4	Δ	371	354	340	LRS-52-2
25.0	21.5	17.5	10.0	11	150	2 3/8 × 4 7/8 × 8 1/2	Δ	506	482	462	LRS-53-2
40.0	34.0	27.5	19.5	11	150	3 × 4 7/8 × 11	Δ	621	592	568	LRS-54-2
60.0	51.0	41.0	30.0	11	151	3 3/4 × 4 7/8 × 10 1/2	Δ	788	752	721	LRS-55-2
90.0	77.0	61.0	45.0	11	151	4 7/16 × 4 7/8 × 11 1/2	Δ	979	933	895	LRS-56-2
130.0	110.0	90.0	68.0	11	151	5 × 4 7/8 × 12	Δ	1283	1222	1173	LRS-57-2
180.0	147.0	120.0	83.0	11	151	5 1/2 × 4 7/8 × 13 1/8	Δ	1552	1478	1419	LRS-58-2
250.0	200.0	165.0	125.0	11	151	6 5/8 × 4 7/8 × 13 25/32	Δ	1890	1800	1728	LRS-59-2
5V ±5% ADJ.											
4.0	3.2	2.4	2.0	11	149	1 1/2 × 4 17/32 × 4 23/32	Δ	182	174	166	LRS-49-5
7.0	5.6	4.2	3.5	11	149	1 1/2 × 4 17/32 × 5 15/32	Δ	229	219	209	LRS-50-5
12.0	9.6	7.2	6.0	11	149	1 11/16 × 4 17/32 × 7 13/64	Δ	290	276	265	LRS-51-5
15.0	13.7	11.1	5.9	11	150	2 × 4 7/8 × 6 1/4	Δ	332	317	303	LRS-52-5
25.0	21.5	17.5	10.0	11	150	2 3/8 × 4 7/8 × 8 1/2	Δ	452	431	413	LRS-53-5
40.0	34.0	27.5	19.5	11	150	3 × 4 7/8 × 11	Δ	554	528	506	LRS-54-5
60.0	51.0	41.0	30.0	11	151	3 3/4 × 4 7/8 × 10 1/2	Δ	706	672	645	LRS-55-5
90.0	77.0	61.0	45.0	11	151	4 7/16 × 4 7/8 × 11 1/2	Δ	874	833	800	LRS-56-5
130.0	110.0	90.0	68.0	11	151	5 × 4 7/8 × 12	Δ	1145	1090	1047	LRS-57-5
180.0	147.0	120.0	83.0	11	151	5 1/2 × 4 7/8 × 13 1/8	Δ	1386	1320	1267	LRS-58-5
250.0	200.0	165.0	125.0	11	151	6 5/8 × 4 7/8 × 13 25/32	Δ	1686	1607	1542	LRS-59-5
6V ±5% ADJ.											
3.3	2.6	2.0	1.7	11	149	1 1/2 × 4 17/32 × 4 23/32	Δ	182	174	166	LRS-49-6
6.0	4.8	3.6	3.0	11	149	1 1/2 × 4 17/32 × 5 15/32	Δ	229	219	209	LRS-50-6
10.0	8.0	6.0	5.0	11	149	1 11/16 × 4 17/32 × 7 13/64	Δ	290	276	265	LRS-51-6
13.5	12.2	9.9	5.2	11	150	2 × 4 7/8 × 6 1/4	Δ	332	317	303	LRS-52-6
21.0	18.5	16.0	8.3	11	150	2 3/8 × 4 7/8 × 8 1/2	Δ	452	431	413	LRS-53-6
35.0	31.0	24.0	17.0	11	150	3 × 4 7/8 × 11	Δ	554	528	506	LRS-54-6
52.0	44.0	36.0	26.0	11	151	3 3/4 × 4 7/8 × 10 1/2	Δ	706	672	645	LRS-55-6
80.0	69.0	54.0	39.0	11	151	4 7/16 × 4 7/8 × 11 1/2	Δ	874	833	800	LRS-56-6
110.0	93.0	76.0	58.0	11	151	5 × 4 7/8 × 12	Δ	1145	1090	1047	LRS-57-6
150.0	123.0	100.0	70.0	11	151	5 1/2 × 4 7/8 × 13 1/8	Δ	1386	1320	1267	LRS-58-6
210.0	170.0	140.0	105.0	11	151	6 5/8 × 4 7/8 × 13 25/32	Δ	1686	1607	1542	LRS-59-6
12V ±5% ADJ.											
1.7	1.4	1.0	0.9	11	149	1 1/2 × 4 17/32 × 4 23/32	Δ	182	174	166	LRS-49-12
3.0	2.4	1.8	1.5	11	149	1 1/2 × 4 17/32 × 5 15/32	Δ	229	219	209	LRS-50-12
5.2	4.1	3.1	2.6	11	149	1 11/16 × 4 17/32 × 7 13/64	Δ	290	276	265	LRS-51-12
7.8	6.8	4.9	2.3	11	150	2 × 4 7/8 × 6 1/4	Δ	332	317	303	LRS-52-12
12.5	11.2	9.6	7.2	11	150	2 3/8 × 4 7/8 × 8 1/2	Δ	452	431	413	LRS-53-12
22.0	18.5	15.0	10.0	11	150	3 × 4 7/8 × 11	Δ	554	528	506	LRS-54-12
30.0	26.0	22.0	16.0	11	151	3 3/4 × 4 7/8 × 10 1/2	Δ	706	672	645	LRS-55-12
47.0	41.0	34.0	21.9	11	151	4 7/16 × 4 7/8 × 11 1/2	Δ	874	833	800	LRS-56-12
65.0	58.0	48.0	34.0	11	151	5 × 4 7/8 × 12	Δ	1145	1090	1047	LRS-57-12
84.0	69.0	56.0	40.0	11	151	5 1/2 × 4 7/8 × 13 1/8	Δ	1386	1320	1267	LRS-58-12
110.0	92.0	74.0	53.0	11	151	6 5/8 × 4 7/8 × 13 25/32	Δ	1686	1607	1542	LRS-59-12
15V ±5% ADJ.											
1.4	1.1	0.8	0.7	11	149	1 1/2 × 4 17/32 × 4 23/32	Δ	182	174	166	LRS-49-15
2.6	2.0	1.6	1.3	11	149	1 1/2 × 4 17/32 × 5 15/32	Δ	229	219	209	LRS-50-15
4.2	3.3	2.5	2.1	11	149	1 11/16 × 4 17/32 × 7 13/64	Δ	290	276	265	LRS-51-15
6.4	5.6	4.0	1.9	11	150	2 × 4 7/8 × 6 1/4	Δ	332	317	303	LRS-52-15
10.0	9.0	7.7	5.8	11	150	2 3/8 × 4 7/8 × 8 1/2	Δ	452	431	413	LRS-53-15
18.0	15.0	12.0	8.0	11	150	3 × 4 7/8 × 11	Δ	554	528	506	LRS-54-15
25.0	22.0	19.0	13.0	11	151	3 3/4 × 4 7/8 × 10 1/2	Δ	706	672	645	LRS-55-15
38.0	33.0	28.0	17.9	11	151	4 7/16 × 4 7/8 × 11 1/2	Δ	874	833	800	LRS-56-15
52.0	46.0	38.0	27.0	11	151	5 × 4 7/8 × 12	Δ	1145	1090	1047	LRS-57-15
68.0	56.0	45.5	32.0	11	151	5 1/2 × 4 7/8 × 13 1/8	Δ	1386	1320	1267	LRS-58-15
90.0	75.0	60.0	43.0	11	151	6 5/8 × 4 7/8 × 13 25/32	Δ	1686	1607	1542	LRS-59-15

*LAMBDA'S RECOMMENDED CHOICE FOR NEW DESIGN REQUIREMENTS.

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								
20V ± 5% ADJ.											
1.0	0.8	0.6	0.5	11	149	1½ × 4 ¹⁷ / ₃₂ × 4 ²³ / ₃₂	Δ	\$ 182	\$ 174	\$ 166	LRS-49-20
2.1	1.7	1.3	1.0	11	149	1½ × 4 ¹⁷ / ₃₂ × 5 ¹⁵ / ₃₂	Δ	229	219	209	LRS-50-20
3.5	2.8	2.1	1.7	11	149	1 ¹¹ / ₁₆ × 4 ¹⁷ / ₃₂ × 7 ¹³ / ₆₄	Δ	290	276	265	LRS-51-20
4.9	4.3	3.0	1.5	11	150	2 × 4 ⁷ / ₈ × 6¼	Δ	332	317	303	LRS-52-20
7.7	6.9	5.9	4.5	11	150	2 ³ / ₈ × 4 ⁷ / ₈ × 8½	Δ	452	431	413	LRS-53-20
13.5	11.5	8.5	5.5	11	150	3 × 4 ⁷ / ₈ × 11	Δ	554	528	506	LRS-54-20
19.0	16.5	14.0	10.0	11	151	3 ³ / ₄ × 4 ⁷ / ₈ × 10½	Δ	706	672	645	LRS-55-20
29.5	27.0	22.0	13.8	11	151	4 ⁷ / ₁₆ × 4 ⁷ / ₈ × 11½	Δ	874	833	800	LRS-56-20
40.0	36.0	30.0	21.0	11	151	5 × 4 ⁷ / ₈ × 12	Δ	1145	1090	1047	LRS-57-20
52.0	43.0	35.0	24.5	11	151	5½ × 4 ⁷ / ₈ × 13¼	Δ	1386	1320	1267	LRS-58-20
70.0	58.0	46.0	33.0	11	151	6 ⁵ / ₈ × 4 ⁷ / ₈ × 13 ²⁵ / ₃₂	Δ	1686	1607	1542	LRS-59-20
24V ± 5% ADJ.											
0.9	0.7	0.5	0.5	11	149	1½ × 4 ¹⁷ / ₃₂ × 4 ²³ / ₃₂	Δ	182	174	166	LRS-49-24
1.8	1.4	1.1	0.9	11	149	1½ × 4 ¹⁷ / ₃₂ × 5 ¹⁵ / ₃₂	Δ	229	219	209	LRS-50-24
3.0	2.4	1.8	1.5	11	149	1 ¹¹ / ₁₆ × 4 ¹⁷ / ₃₂ × 7 ¹³ / ₆₄	Δ	290	276	265	LRS-51-24
4.1	3.6	2.6	1.2	11	150	2 × 4 ⁷ / ₈ × 6¼	Δ	332	317	303	LRS-52-24
6.5	5.8	5.0	3.8	11	150	2 ³ / ₈ × 4 ⁷ / ₈ × 8½	Δ	452	431	413	LRS-53-24
11.5	9.5	7.5	4.5	11	150	3 × 4 ⁷ / ₈ × 11	Δ	554	528	506	LRS-54-24
16.0	14.0	12.0	8.0	11	151	3 ³ / ₄ × 4 ⁷ / ₈ × 10½	Δ	706	672	645	LRS-55-24
25.0	22.5	18.5	11.6	11	151	4 ⁷ / ₁₆ × 4 ⁷ / ₈ × 11½	Δ	874	833	800	LRS-56-24
33.5	29.0	24.0	17.0	11	151	5 × 4 ⁷ / ₈ × 12	Δ	1145	1090	1047	LRS-57-24
44.0	36.0	29.5	20.5	11	151	5½ × 4 ⁷ / ₈ × 13¼	Δ	1386	1320	1267	LRS-58-24
60.0	50.0	40.0	28.0	11	151	6 ⁵ / ₈ × 4 ⁷ / ₈ × 13 ²⁵ / ₃₂	Δ	1686	1607	1542	LRS-59-24
28V ± 5% ADJ.											
0.7	0.6	0.4	0.4	11	149	1½ × 4 ¹⁷ / ₃₂ × 4 ²³ / ₃₂	Δ	182	174	166	LRS-49-28
1.6	1.3	1.0	0.8	11	149	1½ × 4 ¹⁷ / ₃₂ × 5 ¹⁵ / ₃₂	Δ	229	219	209	LRS-50-28
2.5	2.0	1.5	1.2	11	149	1 ¹¹ / ₁₆ × 4 ¹⁷ / ₃₂ × 7 ¹³ / ₆₄	Δ	290	276	265	LRS-51-28
3.5	3.1	2.2	1.1	11	150	2 × 4 ⁷ / ₈ × 6¼	Δ	332	317	303	LRS-52-28
5.7	5.1	4.4	3.3	11	150	2 ⁵ / ₈ × 4 ⁷ / ₈ × 8½	Δ	452	431	413	LRS-53-28
9.5	8.5	6.5	4.0	11	150	3 × 4 ⁷ / ₈ × 11	Δ	554	528	506	LRS-54-28
14.0	12.0	10.0	7.0	11	151	3 ³ / ₄ × 4 ⁷ / ₈ × 10½	Δ	706	672	645	LRS-55-28
22.0	20.0	16.0	10.0	11	151	4 ⁷ / ₁₆ × 4 ⁷ / ₈ × 11½	Δ	874	833	800	LRS-56-28
29.0	25.5	21.0	15.0	11	151	5 × 4 ⁷ / ₈ × 12	Δ	1145	1090	1047	LRS-57-28
38.0	31.0	25.5	17.5	11	151	5½ × 4 ⁷ / ₈ × 13¼	Δ	1386	1320	1267	LRS-58-28
52.0	43.0	34.0	24.0	11	151	6 ⁵ / ₈ × 4 ⁷ / ₈ × 13 ²⁵ / ₃₂	Δ	1686	1607	1542	LRS-59-28
48V ± 5% ADJ.											
0.4	0.3	0.2	0.2	11	149	1½ × 4 ¹⁷ / ₃₂ × 4 ²³ / ₃₂	Δ	182	174	166	LRS-49-48
0.9	0.7	0.5	0.4	11	149	1½ × 4 ¹⁷ / ₃₂ × 5 ¹⁵ / ₃₂	Δ	229	219	209	LRS-50-48
1.5	1.2	0.9	0.7	11	149	1 ¹¹ / ₁₆ × 4 ¹⁷ / ₃₂ × 7 ¹³ / ₆₄	Δ	290	276	265	LRS-51-48
2.0	1.7	1.2	0.6	11	150	2 × 4 ⁷ / ₈ × 6¼	Δ	332	317	303	LRS-52-48
3.3	2.8	2.4	1.8	11	150	2 ³ / ₈ × 4 ⁷ / ₈ × 8½	Δ	452	431	433	LRS-53-48
5.8	5.1	3.6	2.3	11	150	3 × 4 ⁷ / ₈ × 11	Δ	554	528	506	LRS-54-48
8.2	7.2	6.2	4.2	11	151	3 ³ / ₄ × 4 ⁷ / ₈ × 10½	Δ	706	672	645	LRS-55-48
13.0	12.0	9.5	6.0	11	151	4 ⁷ / ₁₆ × 4 ⁷ / ₈ × 11½	Δ	874	833	800	LRS-56-48
17.5	15.5	12.5	9.0	11	151	5 × 4 ⁷ / ₈ × 12	Δ	1145	1090	1047	LRS-57-48
22.5	18.5	15.0	10.5	11	151	5½ × 4 ⁷ / ₈ × 13¼	Δ	1386	1320	1267	LRS-58-48
31.0	26.0	21.0	15.0	11	151	6 ⁵ / ₈ × 4 ⁷ / ₈ × 13 ²⁵ / ₃₂	Δ	1686	1607	1547	LRS-59-48

*LAMBDA'S RECOMMENDED CHOICE FOR NEW DESIGN REQUIREMENTS.

PART IA—AC-TO-DC SWITCHING POWER SUPPLIES

LAMBDA'S MIL-ENVIRONMENT LR SERIES

DC OUTPUT

Voltage range shown in tables.

REGULATED VOLTAGE

regulation, line 0.1% from 95 to 132VAC. 95 to 132VAC or 187 to 265VAC on LRS-49, 50, 51, 57, 58 and "M" option models. 187 to 265VAC on LRS-59 and "V" option models.

regulation, load 0.1% from no load to full load.

ripple and noise
(20MHz Bandwidth) 10mV RMS, 35mV pk-pk for 2V models of LRS-49, 50, 51 and all 5V and 6V models. (25mV pk-pk for all other 2V models).
15mV RMS, 100mV pk-pk for 12V through 28V models.
35mV RMS, 150mV pk-pk for 48V models.

temperature
coefficient 0.03%/°C.

remote programming
resistance 1000Ω/volt.

remote programming
voltage volt per volt.

AC INPUT

line 95 to 132VAC, 47-440Hz.
95 to 132VAC or 187 to 265VAC (user selectable), 47-440Hz on LRS-49, 50, 51, 57, 58.
85 to 132/170 to 265 VAC, 47-440Hz on "M" option models.
187 to 265VAC, 47-440Hz on LRS-59 only.

power LRS-49: 30 watts maximum.
LRS-50: 51.5 watts maximum.
LRS-51: 96 watts maximum.
LRS-52: 137 watts maximum.
LRS-53: 225 watts maximum.
LRS-54: 380 watts maximum.
LRS-55: 515 watts maximum.
LRS-56: 819 watts maximum.
LRS-57: 1100 watts maximum.
LRS-58: 1350 watts maximum.
LRS-59: 1900 watts maximum.

DC INPUT

145VDC $\pm$ 10%. (260 to 370VDC for LRS-49, 50, 51, 57, 58, 59 and "M" and "V" option models.)

EFFICIENCY

50% min for 2V model of LRS-49. 55% min for all other 2V models. 65% min for 5V and 6V models of LRS-49. 67% min. for 5V and 6V models of LRS-52. 66% min for 12V and 15V models of LRS-49. 68% min for 5V and 6V models of LRS-50. 70% min for 5V through 15V models of LRS-53, 54; 12V and 15V models of LRS-50; 20V through 48V models of LRS-49. 73% min on 5V and 6V models of LRS-51; 20V through 48V models of LRS-50. 75% min for 5V and 6V models of LRS-55, 56; 5V through 15V models of LRS-57, 58, 59; 12V and 15V models of LRS-51; 12V through 20V models of LRS-52; 20V through 48V models of LRS-53, 54. 77% min for 12V through 20V models of LRS-55, 56. 78% min for 20V through 48V models of LRS-51; 24V through 48V models of LRS-52. 80% min for 20V through 48V models of LRS-57, 58, 59; 24V through 48V models of LRS-55, 56.

OVERSHOOT

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

OPERATING TEMPERATURE RANGE

Continuous duty -10°C to +71°C with suitable derating above 40°C. Guaranteed turn-on at -20°C.

STORAGE TEMPERATURE RANGE

-55°C to +85°C.

OVERLOAD PROTECTION

ELECTRICAL

External 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.

THERMAL

Self-resetting thermostat.

FUSING

Line fuse removes the power supply from the line if a short occurs in the input circuitry.

OVERVOLTAGE PROTECTION

Overvoltage protection is standard on all models. If output voltage increases above a preset level, inverter drive is removed.

COOLING

All units are convection cooled. No fans or blowers are needed.

IN-RUSH LIMITING

The turn-on in-rush current will not exceed 40 amps peak from a cold start. (13 amps on LRS-49, 50. 19 amps on LRS-51. 50 amps on LRS-57, 58, 59.)

DC OUTPUT CONTROLS

Simple screwdriver adjustment over the entire voltage range.

INPUT AND OUTPUT CONNECTIONS

All input, output, sensing, and remote on/off connections for LRS-49, 50, 51, 52 and LRS-53 are made through barrier strip terminals. All input, sensing and remote on/off connections for LRS-54, LRS-55, LRS-56, LRS-57, LRS-58 and LRS-59 are made through barrier strip terminals. DC output connection is made through heavy duty threaded bus bars.

MOUNTING

Two mounting surfaces and two mounting positions on LRS-52, 53, 54. One mounting surface and one mounting position on LRS-49, 50, 51, 55, 56, 57, 58, 59.

POWER FAILURE

2V, 5V and 6V models will remain within regulation limits for at least 16.7 msec. after loss of AC power when operating at full load, V_o max, and 105VAC input at 60Hz. (105 or 210VAC for LRS-49, 50, 51, 57, 58 and "M" option models. 210VAC at 60Hz for LRS-59.)

REMOTE SENSING

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

REMOTE TURN-ON/TURN-OFF

Provision is made for digitally controlled remote turn-on, turn-off (TTL Compatible).

FUNGUS PROOFING

All units are inherently fungi inert.

MILITARY SPECIFICATIONS

The LR Series is built in Lambda factories to quality and inspection procedures which are similar to MIL-I-45208. The LRS-49, 50 and 51 are pending approval of environmental testing. The remainder of the series has passed environmental testing in accordance with MIL-STD-810C.

- 1) Low Pressure—Method 500.1, Procedure I.
- 2) High Temperature—Method 501.1, Procedures I and 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 (-10°C Operating).
- 6) Humidity—Method 507.1, Procedure I.
- 7) Fungus—Method 508.1, Procedure I.
- 8) Vibration—Method 514.2, Procedures X and XI.
- 9) Shock—Method 516.2, Procedures I and III.

EMI

Conducted EMI conforms to FCC Docket 20780 Class A, and MIL-STD-461A Notice 4 CEO4 for power leads. LRS-57, LRS-58, LRS-59, and "M" and "V" option models also conform to VDE 0871 Class A.

PHYSICAL DATA

Package Model	Lbs. Net	Lbs. Ship	Size Inches
LRS-49	1 ³ / ₈	2 ³ / ₈	1 ¹ / ₂ × 4 ¹⁷ / ₃₂ × 4 ²³ / ₃₂
LRS-50	1 ¹ / ₂	2 ¹ / ₂	1 ¹ / ₂ × 4 ¹⁷ / ₃₂ × 5 ¹⁵ / ₃₂
LRS-51	2	3	1 ¹¹ / ₁₆ × 4 ¹⁷ / ₃₂ × 7 ¹³ / ₆₄
LRS-52	2 ¹ / ₄	3 ¹ / ₄	2 × 4 ⁷ / ₈ × 6 ¹ / ₄
LRS-53	3 ¹ / ₄	4 ¹ / ₄	2 ³ / ₈ × 4 ⁷ / ₈ × 8 ¹ / ₂
LRS-54	6 ¹ / ₂	7 ¹ / ₂	3 × 4 ⁷ / ₈ × 11
LRS-55	7	8 ¹ / ₂	3 ³ / ₄ × 4 ⁷ / ₈ × 10 ¹ / ₂
LRS-56	8 ¹ / ₂	10	4 ⁷ / ₁₆ × 4 ⁷ / ₈ × 11 ¹ / ₂
LRS-57	10 ¹ / ₂	12	5 × 4 ⁷ / ₈ × 12
LRS-58	12 ¹ / ₂	14	5 ¹ / ₂ × 4 ⁷ / ₈ × 13 ¹ / ₈
LRS-59	16 ¹ / ₂	19	6 ³ / ₈ × 4 ⁷ / ₈ × 13 ²⁵ / ₃₂

OPTIONS

AC INPUT

Add Suffix ¹	For Operation at:	Price
-V (LRS-55, 56 only)	185 to 265VAC 47-440Hz	12%
-M (LRS-52, 53, 54 only)	95 to 132VAC or 187 to 265VAC, 47-440Hz (customer selectable)	12%

¹ Add Suffix after package number, i.e.: LRS-55V-5, LRS-52M-5.

POWER FACTOR AND HARMONIC CORRECTION

0.995 power factor and harmonic correction per IEC 555-2 when used with the PFHC-2600. See pages 30-31.

ACCESSORIES

Rack Adapters and other accessories are available. See Part IV of this catalog.

FINISH

Gray, Fed. Std. 595, No. 26081.

GUARANTEED FOR 5 YEARS

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

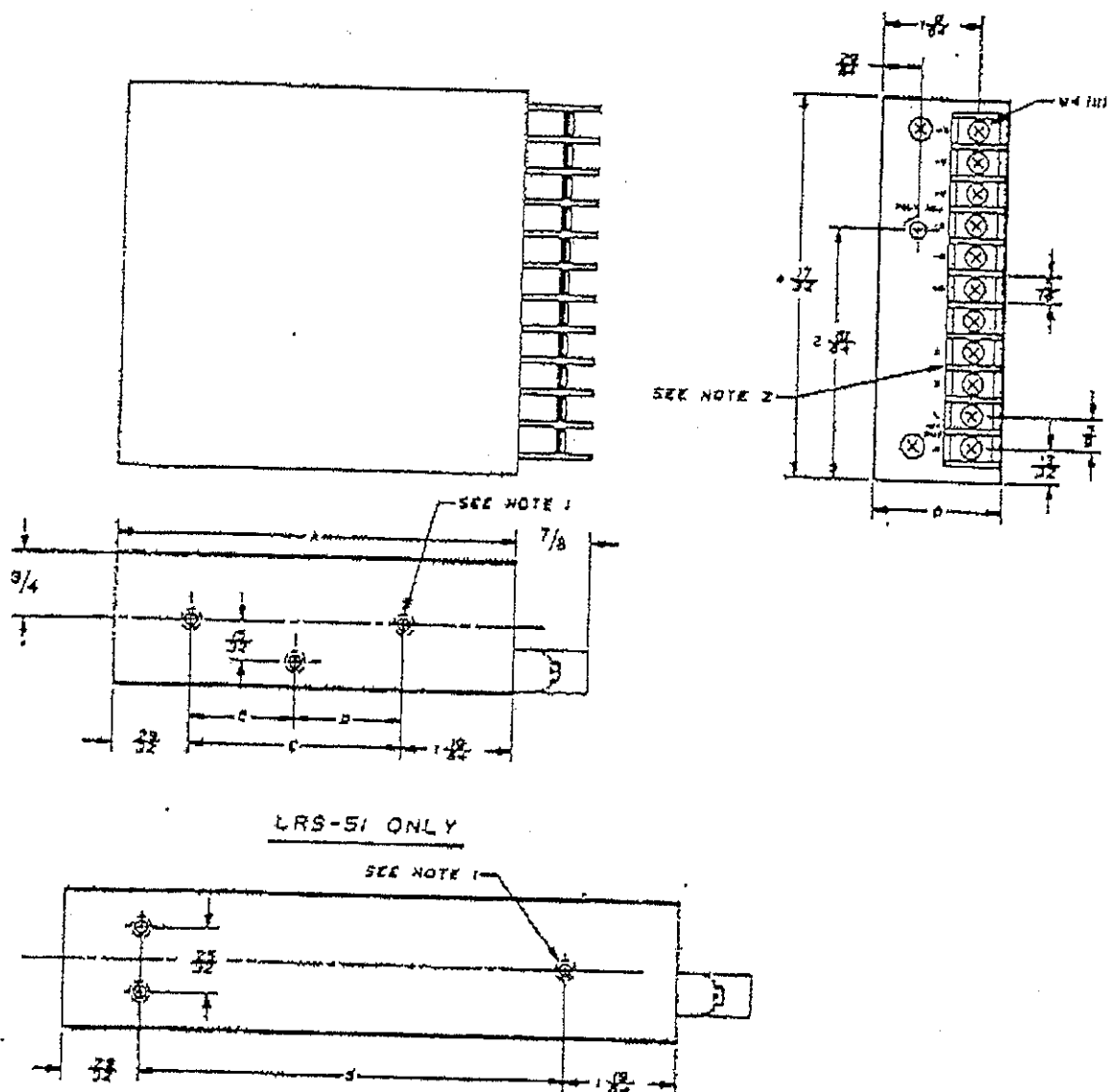
SAFETY AGENCY APPROVALS

UL recognized. CSA certified. The LRS-57, 58, 59 are under evaluation.

TUV LICENSED

110/220 and 220 input versions.

LRS-49
LRS-50
LRS-51



DIM. MODEL	A	B	E
LRS-49	4 ²³ / ₃₂	1 ¹ / ₂	2 ³³ / ₆₄
LRS-50	5 ¹⁵ / ₃₂	1 ¹ / ₂	3 ¹⁷ / ₆₄
LRS-51	7 ¹³ / ₆₄	1 ¹¹ / ₁₆	

NOTE 1) NO. 6-32 TAPPED HOLES (3) FOR CUSTOMER CHASSIS MOUNTING. SCREWS MUST NOT PROTRUDE INTO POWER SUPPLY BY MORE THAN ¹⁶/₆₄ INCH.

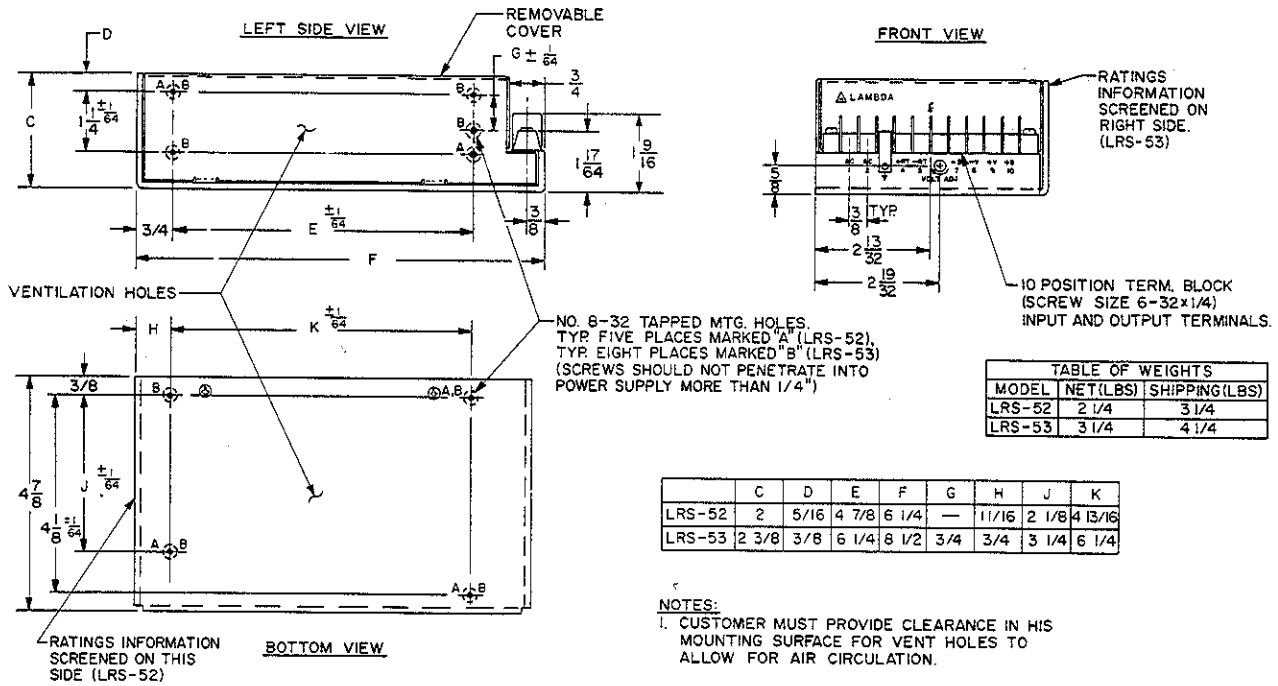
NOTE 2) 95 - 132 VAC INPUT, SHORT A TO B
187 - 250 VAC INPUT, A TO B OPEN

TABLE OF WEIGHTS		
MODEL	NET (LBS.)	SHIPPING (LBS.)
LRS-49	1 ³ / ₈	2 ³ / ₈
LRS-50	1 ¹ / ₂	2 ¹ / ₈
LRS-51	2	3

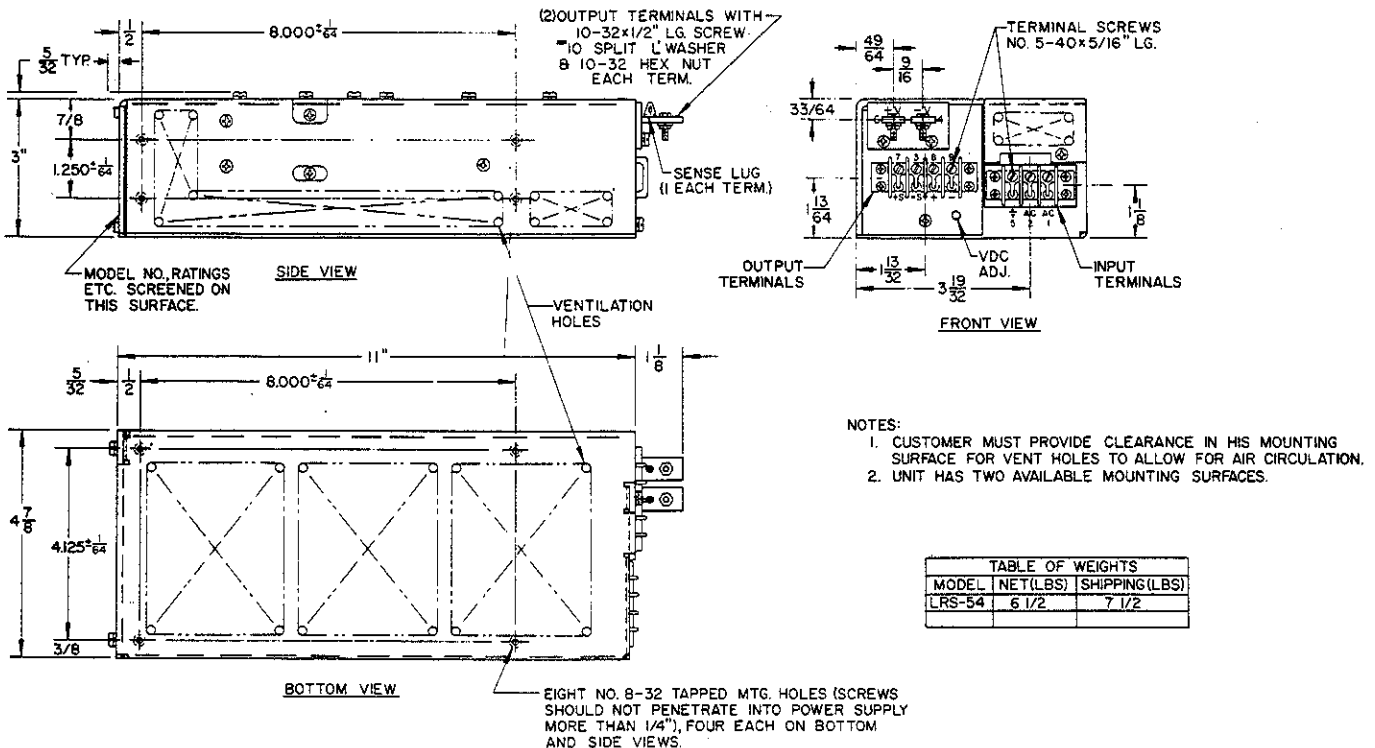
PART V—MECHANICAL DRAWINGS

LRS-52, LRS-53 AND LRS-54

LRS-52
LRS-53



LRS-54



LRS-55, LRS-56, LRS-57, LRS-58 AND LRS-59

FRONT VIEW

INPUT TERMINALS
TERMINAL SCREWS NO. 5-40 x 5/16 LG. (TYP)
SEE NOTE 4
SENSE TERMINALS AND REMOTE ON/OFF

SIDE VIEW

SENSE LUG (1 EACH TERM)
WIRE LUG
10-32x3/8" LG. SCREW
10 SPLIT L WASHER AND
WIRE LUG

FRONT VIEW

INPUT TERMINALS
TERMINAL SCREWS NO. 5-40 x 5/16 LG. (TYP)
SEE NOTE 4
SENSE TERMINALS AND REMOTE ON/OFF

TABLE OF WEIGHTS

MODEL	NET WT.	SHIP WT.
LRS-55	6 1/2	7
LRS-56	9 1/2	11

FRONT VIEW

INPUT TERMINALS
TERMINAL SCREWS NO. 5-40 x 5/16 LG. (TYP)
SEE NOTE 4
SENSE TERMINALS AND REMOTE ON/OFF

TABLE OF WEIGHTS

	A	B	C	D	E	F	G	H	J
LRS-55	9 1/8"	7 1/8"	3 3/8"	W 000"	1"	1 1/32"	1.250	—	—
LRS-56	10 1/8"	12 1/8"	4 1/8"	—	—	5/8"	3.000	3.000	1 1/8"

NOTES:

- CUSTOMER MUST PROVIDE CLEARANCE IN HIS MOUNTING SURFACE FOR VENT HOLES TO ALLOW FOR AIR CIRCULATION.
- UNIT HAS ONE MOUNTING SURFACE.
- RADIATOR FINS MUST BE MOUNTED IN A VERTICAL POSITION.
- TO OPEN UNIT FOR SERVICING, REMOVE (8) 6-32 SCREWS SHOWN SHADED.

FRONT VIEW

INPUT TERMINALS
TERMINAL SCREWS NO. 5-40 x 5/16 LG. (TYP)
SEE NOTE 4
SENSE TERMINALS AND REMOTE ON/OFF

TABLE OF WEIGHTS

	A	B	C	D	E	F	G	H	J
LRS-55	9 1/8"	7 1/8"	3 3/8"	W 000"	1"	1 1/32"	1.250	—	—
LRS-56	10 1/8"	12 1/8"	4 1/8"	—	—	5/8"	3.000	3.000	1 1/8"

NOTES:

- CUSTOMER MUST PROVIDE CLEARANCE IN HIS MOUNTING SURFACE FOR VENT HOLES TO ALLOW FOR AIR CIRCULATION.
- UNIT HAS ONE MOUNTING SURFACE.
- RADIATOR FINS MUST BE MOUNTED IN A VERTICAL POSITION.
- TO OPEN UNIT FOR SERVICING, REMOVE (8) 6-32 SCREWS SHOWN SHADED.

[illegible]

FRONT VIEW
LRS 57

AC INPUT TERMINALS
SCREWS # 6

7/8

2 3/8

2 3/4

1 3/8

3/8

2 3/8

1 1/2

3/8

3/16

7/8

1 1/2

2 3/8

GROUND
TERM. SCREW # 8

MODEL, RATINGS, ETC.
SCREENED ON THIS SURFACE

[illegible]

Technical drawing of a cabinet showing three views: Front View, Bottom View, and Left View.

Front View: Shows the cabinet's height (G) and width (F). It includes a top section with vertical slats and a base with casters. Dimensions J and H are indicated at the base.

Bottom View: Shows the cabinet's width (A) and depth (D). It includes a top section with vertical slats and a base with casters. Dimensions B and C are indicated on the right side. A note points to the base: "NO. 8-32 UNC-2B THD 4 PLACES FOR MTG UNIT".

Left View: Shows the cabinet's height (G) and width (F). It includes a top section with vertical slats and a base with casters. Dimensions J and H are indicated at the base.

NOTES: 1. CUSTOMER TO PROVIDE CLEARANCE IN HIS MOUNTING SURFACE FOR VENT HOLES TO ALLOW FOR AIR CIRCULATION.
2. CUSTOMER MOUNTING SCREWS MUST NOT PROTRUDE INTO POWER SUPPLY BY MORE THAN 5/8 INCH FOR LRS 57 & NOT MORE THAN 3/8 FOR LRS 59.

DESCRIPTION	A	B	C	D	E	F	G	H	J
LRS 57	5	5.891	2.8	4.082	3.1	4.8	12.3	1.8	-
LRS 58	5.2	5.891	2.7	4.062	3.5	4.7	13.3	-	1.7
LRS 59	6.2	8.000	2.5	4.125	3.2	4.7	13.2	-	1.4

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