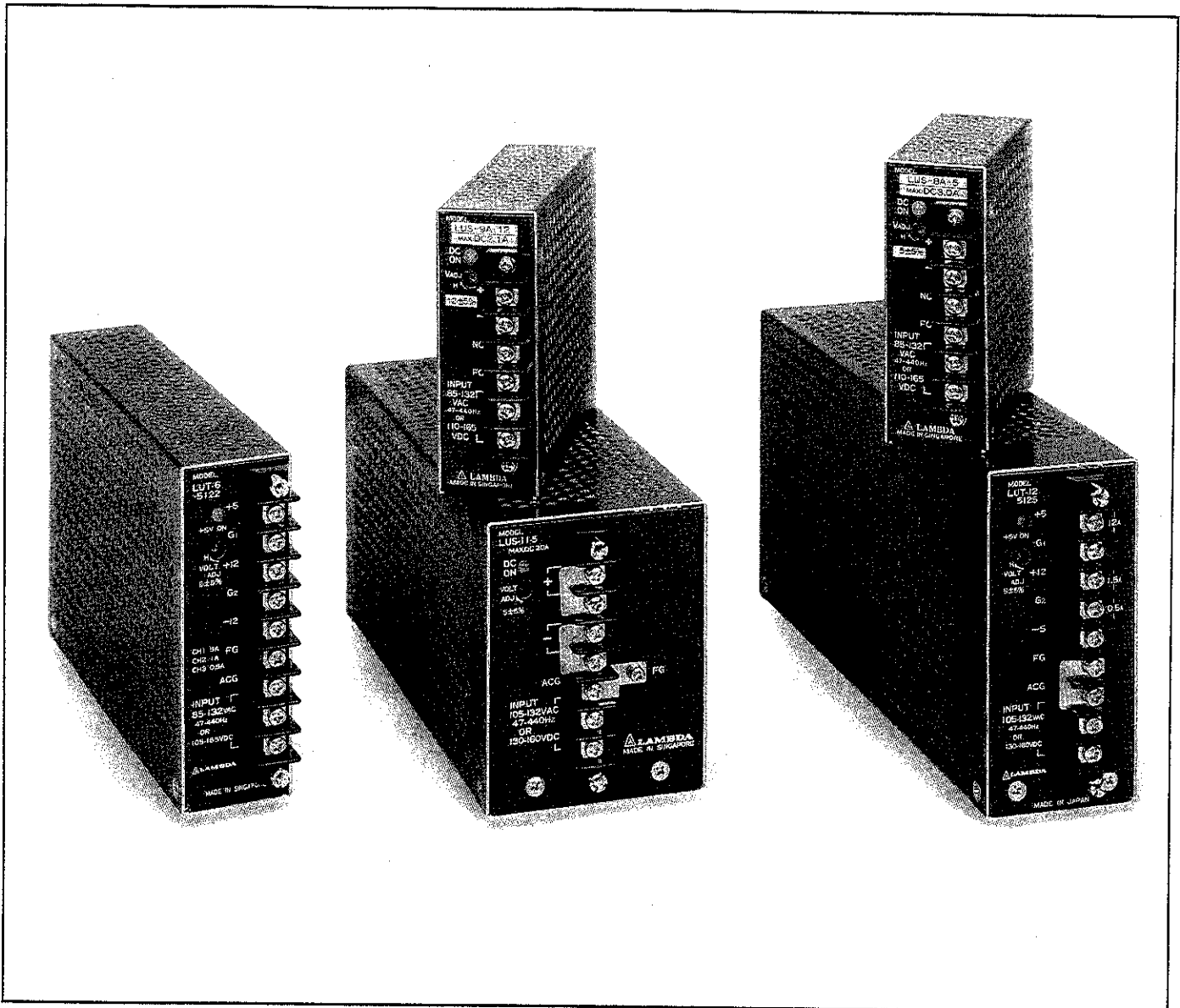


PART IA—AC-TO-DC SWITCHING POWER SUPPLIES

LAMBDA'S INDUSTRIAL LU AND LUA SERIES



ENCLOSED UNITS AVAILABLE FOR 120VAC OR 220VAC OPERATION

- Available for 120VAC or 220VAC operation so that when an end market is known, Lambda can supply the exact power module to meet the requirement of that market.
- All models are UL recognized and CSA certified, thus eliminating the problems with end product agency approvals.
- Available in 27 single output, 10 dual output and 14 triple output models, up to 48VDC, up to 100W. The LU Series offers numerous combinations of off-the-shelf singles, duals, and triples to meet any low power requirement, thereby eliminating the need for a custom unit.
- Grade 3 design.

PART IA—AC-TO-DC SWITCHING POWER SUPPLIES

LAMBDA'S INDUSTRIAL LU SERIES

DC OUTPUT

Voltage range shown in tables.

REGULATED VOLTAGE

regulation, line 0.4% for input variations from 105 to 132VAC or 132 to 105VAC on LUS-11, LUT-6 and LUT-12 models. 0.4% for input variations from 85 to 132 VAC or 132 to 85VAC on all other models.

regulation, load 0.85% for all LUS and LUD models, and main output of LUT-12, LUT-13 and LUT-14 models. 0.8% for main output of LUT-6 models, 1% for second output of all LUT models and 2.0% for third output of all LUT models (0 to full load, no preload required). All outputs are regulated on LUT models thereby eliminating cross regulation problems.

ripple and noise (20MHz Bandwidth) 15mV RMS on all models. (LUS-8A, 9A, 10A) — 120mV pk-pk for 5V models; 150mV pk-pk for 9V through 15V models; 200mV pk-pk for 24V and 28V models (LUS-11); 150mV pk-pk for 5V model; 200mV pk-pk for 12V and 15V models; 250mV for 24V and 28V models. 100mV pk-pk for main output of LUT-6 models, 120mV pk-pk for main output of LUT-12 models. 150mV pk-pk for second and third outputs of LUT-6 and LUT-12 models. (LUD-15, LUD-16, LUT-13, LUT-14) 150mV pk-pk on 5V outputs; 250mV pk-pk on all other outputs.

temperature coefficient 0.02%/°C. 0.04%/°C for second and third outputs of LUT-6 and LUT-12 models. Less than 0.02%/°C for main and second output of LUT-13 and LUT-14. Less than 0.04%/°C for third output of LUT-13 and LUT-14.

AC INPUT

line 105 to 132VAC, 47-440Hz on LUS-11, LUT-6 and LUT-12. 85 to 132VAC, 47-440Hz on all other models.

DC INPUT

130 to 160VDC for LUS-11, LUT-6, LUT-12 models. 110 to 175VDC for LUD-15, LUD-16, LUT-13. 110 to 165VDC for all other models.

EFFICIENCY

62% min for LUS-8A models. 66% min for LUS-9A and LUD-15 models. 67% min for LUT-6-5122. 70% min for LUS-10A, LUT-6-5152, LUT-13 and LUT-14 models. 71% min for LUD-15-16. 72% min for LUD-15-31 and LUS-11 models. 73% min for LUD-15-33. 74% min for LUD-15-44 and LUD-16-13, -16, -33 models. 75% min for LUD-16-31, -44 models.

OVERSHOOT

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

OPERATING TEMPERATURE RANGE

Continuous duty 0°C to 60°C (0° to 50°C for LUS-11, LUT-6 and LUT-12 models) with suitable derating.

STORAGE TEMPERATURE RANGE

-30°C to +85°C.

OVERLOAD PROTECTION ELECTRICAL

External overload protection, automatic factory preset electronic current limiting circuit limits the output current thereby providing protection for the load as well as the power supply. Internal failure protection provided by fuse.

OVERVOLTAGE PROTECTION

Overvoltage protection is standard on LUS-9A, LUS-10A, LUS-11 and main output of LUT models and on lower voltage output of LUD models.

HOLD UP TIME

Output will remain within regulation limits for at least 16 msec. after loss of AC power at full load with nominal output voltage and 105VAC input at 60Hz (130VDC input) — (117VAC at 60Hz for LUS-11 and LUT-12).

COOLING

Convection cooled, no fans or blowers needed.

DC OUTPUT CONTROLS

Simple screwdriver voltage adjustment over the entire voltage range of LUS and LUD models and main output of LUT models. Second and third outputs of LUT models are fixed.

INPUT AND OUTPUT CONNECTIONS

Heavy duty terminal block on front of chassis.

OUTPUT STATUS INDICATOR.

LED indicates presence of voltage on single output models and on main output of LUT and LUD models.

MOUNTING

One mounting surface, one mounting position.

PHYSICAL DATA

| Package Model | Lbs. Net | Lbs. Ship | Size Inches* |
|---------------|----------|-----------|--------------------|
| LUS-8A | 0.62 | 0.75 | 3.82 × 1.38 × 3.54 |
| LUS-9A | 0.78 | 1.00 | 3.82 × 1.38 × 4.53 |
| LUS-10A | 1.04 | 1.25 | 3.82 × 1.46 × 6.02 |
| LUS-11 | 2.43 | 2.99 | 3.82 × 3.08 × 7.88 |
| LUD-15 | 1.23 | 1.75 | 3.81 × 1.65 × 7.88 |
| LUD-16 | 1.85 | 2.35 | 3.81 × 2.56 × 8.66 |
| LUT-6 | 1.21 | 1.66 | 4.50 × 1.48 × 7.06 |
| LUT-12 | 2.00 | 2.45 | 4.54 × 2.18 × 8.66 |
| LUT-13 | 1.29 | 1.82 | 1.81 × 4.50 × 7.20 |
| LUT-14 | 1.67 | 2.25 | 4.53 × 2.15 × 8.66 |

*Excluding terminal block.

ACCESSORIES

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

FINISH

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

GUARANTEE

1 year guarantee includes labor as well as parts. Guarantee applies to operation at full published specifications at end of 1 year after shipment.



UL recognized. CSA certified.

PART IA — AC-TO-DC SWITCHING POWER SUPPLIES

INDUSTRIAL SWITCHING SELECTOR GUIDE

Single Output.

| MAX CURRENT AT OPERATING TEMPERATURE OF | | | COMPLETE ELEC. SPEC. PG. | COMPLETE MECH. SPEC. PG. | DIMENSIONS (inches) | LAMBDA'S CHOICE (Δ)* | QTY. 1 | QTY. 10 | PRICE | | | | MODEL |
|---|------|------|--------------------------|--------------------------|---------------------|-------------------------------|--------|---------|---------|----------|----------|-----------|------------|
| 40°C | 50°C | 60°C | | | | | | | QTY. 25 | QTY. 100 | QTY. 250 | QTY. 1000 | |
| 5V \pm 5% ADJ. | | | | | | | | | | | | | |
| 3.0 | 2.1 | 1.5 | 43 | 165 | 3.82 x 1.38 x 3.54 | — | 72 | 69 | 66 | 56 | 51 | — | LUS-8A-5 |
| 5.0 | 3.5 | 2.5 | 43 | 165 | 3.82 x 1.38 x 4.53 | — | 110 | 106 | 102 | 88 | 78 | — | LUS-9A-5 |
| 10.0 | 7.0 | 5.0 | 43 | 165 | 3.82 x 1.46 x 6.02 | — | 147 | 141 | 134 | 118 | 104 | — | LUS-10A-5 |
| 20.0 | 14.0 | — | 43 | 165 | 3.82 x 3.08 x 7.88 | — | 210 | 200 | 191 | 165 | 149 | 140 | LUS-11-5 |
| 9V \pm 5% ADJ. | | | | | | | | | | | | | |
| 1.7 | 1.2 | 0.9 | 43 | 165 | 3.82 x 1.38 x 3.54 | — | 72 | 69 | 66 | 56 | 51 | — | LUS-8A-9 |
| 5.6 | 3.9 | 2.8 | 43 | 165 | 3.82 x 1.46 x 6.02 | — | 147 | 141 | 134 | 118 | 104 | — | LUS-10A-9 |
| 12V \pm 5% ADJ. | | | | | | | | | | | | | |
| 1.3 | 0.9 | 0.7 | 43 | 165 | 3.82 x 1.38 x 3.54 | — | 72 | 69 | 66 | 56 | 51 | — | LUS-8A-12 |
| 2.1 | 1.5 | 1.1 | 43 | 165 | 3.82 x 1.38 x 4.53 | — | 110 | 106 | 102 | 88 | 78 | — | LUS-9A-12 |
| 4.2 | 2.9 | 2.1 | 43 | 165 | 3.82 x 1.46 x 6.02 | — | 147 | 141 | 134 | 118 | 104 | — | LUS-10A-12 |
| 8.5 | 6.0 | — | 43 | 165 | 3.82 x 3.08 x 7.88 | — | 210 | 200 | 191 | 165 | 149 | — | LUS-11-12 |
| 15V \pm 5% ADJ. | | | | | | | | | | | | | |
| 1.0 | 0.7 | 0.5 | 43 | 165 | 3.82 x 1.38 x 3.54 | — | 72 | 69 | 66 | 56 | 51 | — | LUS-8A-15 |
| 1.7 | 1.2 | 0.9 | 43 | 165 | 3.82 x 1.38 x 4.53 | Δ | 110 | 106 | 102 | 88 | 78 | — | LUS-9A-15 |
| 3.4 | 2.4 | 1.7 | 43 | 165 | 3.82 x 1.46 x 6.02 | — | 147 | 141 | 134 | 118 | 104 | — | LUS-10A-15 |
| 7.0 | 4.9 | — | 43 | 165 | 3.82 x 3.08 x 7.88 | — | 210 | 200 | 191 | 165 | 149 | — | LUS-11-15 |

PART IA — AC-TO-DC SWITCHING POWER SUPPLIES

INDUSTRIAL SWITCHING SELECTOR GUIDE

Single Output.

| MAX CURRENT AT OPERATING TEMPERATURE OF | | | COMPLETE ELEC. SPEC. PG. | COMPLETE MECH. SPEC. PG. | DIMENSIONS (inches) | LAMBDA'S CHOICE (Δ)* | QTY. 1 | QTY. 10 | PRICE | | | QTY. 1000 | MODEL |
|---|------|------|--------------------------|--------------------------|---------------------|-------------------------------|--------|---------|---------|----------|----------|-----------|------------|
| 40°C | 50°C | 60°C | | | | | | | QTY. 25 | QTY. 100 | QTY. 250 | | |
| 24V \pm 5% ADJ. | | | | | | | | | | | | | |
| 0.7 | 0.5 | 0.4 | 43 | 165 | 3.82 x 1.38 x 3.54 | — | 72 | 69 | 66 | 56 | 51 | — | LUS-8A-24 |
| 1.1 | 0.8 | 0.6 | 41 | 165 | 3.82 x 1.38 x 4.53 | — | 110 | 106 | 102 | 88 | 78 | — | LUS-9A-24 |
| 2.1 | 1.5 | 1.0 | 43 | 165 | 3.82 x 1.46 x 6.02 | — | 147 | 141 | 134 | 118 | 104 | — | LUS-10A-24 |
| 4.5 | 3.2 | — | 43 | 165 | 3.82 x 3.08 x 7.88 | — | 210 | 206 | 191 | 165 | 149 | — | LUS-11-24 |
| 28V \pm 5% ADJ. | | | | | | | | | | | | | |
| 0.6 | 0.4 | 0.3 | 43 | 165 | 3.82 x 1.38 x 3.54 | — | 72 | 69 | 66 | 56 | 51 | — | LUS-8A-28 |
| 0.9 | 0.6 | 0.5 | 43 | 165 | 3.82 x 1.38 x 4.53 | — | \$ 110 | \$ 106 | \$ 102 | \$ 88 | \$ 78 | \$ — | LUS-9A-28 |
| 1.8 | 1.3 | 0.9 | 43 | 165 | 3.82 x 1.46 x 6.02 | — | 147 | 141 | 134 | 118 | 104 | — | LUS-10A-28 |
| 3.6 | 2.5 | — | 41 | 165 | 3.82 x 3.08 x 7.88 | — | 210 | 200 | 191 | 165 | 149 | — | LUS-11-28 |
| 48V \pm 5% ADJ. | | | | | | | | | | | | | |
| 0.35 | 0.24 | 0.18 | 43 | 165 | 3.82 x 1.38 x 3.54 | — | 72 | 69 | 66 | 56 | 51 | — | LUS-8A-48 |
| 1.0 | 0.7 | 0.55 | 43 | 165 | 3.82 x 1.46 x 6.02 | — | 147 | 141 | 134 | 118 | 104 | — | LUS-10A-48 |

*28V models continued on next page.

PART IA — AC-TO-DC SWITCHING POWER SUPPLIES

INDUSTRIAL SWITCHING SELECTOR GUIDE

Dual Output. LU Series.

| VOLT Vo | MAX CURRENT AT OPERATING TEMPERATURE OF | | | COMPLETE ELEC. SPEC. PG. | COMPLETE MECH. SPEC. PG. | DIMENSIONS (inches) | QTY. 1 | QTY. 10 | PRICE | | | MODEL |
|-----------------------------------|---|------|------|-----------------------------------|-----------------------------------|------------------------|-----------|------------|------------|-------------|-------------|-----------|
| | 40°C | 50°C | 60°C | | | | | | QTY. 25 | QTY. 100 | QTY. 250 | |
| 5V ±5% ADJ., 12V ±5% ADJ. | | | | | | | | | | | | |
| 5 | 5.0 | 5.0 | 3.5 | 43 | 166 | 3.81 × 1.65 × 7.88 | \$182 | \$173 | \$165 | \$143 | \$135 | LUD-15-13 |
| 12 | 2.1 | 2.1 | 1.47 | | | | | | | | | |
| 15 | 10.0 | 10.0 | 6.0 | 43 | 166 | 3.81 × 2.56 × 8.66 | 254 | 242 | 233 | 203 | 191 | LUD-16-13 |
| 12 | 4.0 | 4.0 | 2.4 | | | | | | | | | |
| 5V ±5% ADJ., 24V ±5% ADJ. | | | | | | | | | | | | |
| 5 | 5.0 | 5.0 | 3.5 | 43 | 166 | 3.81 × 1.65 × 7.88 | 182 | 173 | 165 | 143 | 135 | LUD-15-16 |
| 24 | 1.0 | 1.0 | 0.7 | | | | | | | | | |
| 5 | 10.0 | 10.0 | 6.0 | 43 | 166 | 3.81 × 2.56 × 8.66 | 254 | 242 | 233 | 203 | 191 | LUD-16-16 |
| 24 | 2.0 | 2.0 | 1.2 | | | | | | | | | |
| 12V ±5% ADJ., 5V ±5% ADJ. | | | | | | | | | | | | |
| 12 | 4.0 | 4.0 | 2.8 | 43 | 166 | 3.81 × 1.65 × 7.88 | 182 | 173 | 165 | 143 | 135 | LUD-15-31 |
| 5 | 2.0 | 2.0 | 1.4 | | | | | | | | | |
| 12V ±5% ADJ., 12V ±5% ADJ. | | | | | | | | | | | | |
| 12 | 3.0 | 3.0 | 2.1 | 43 | 166 | 3.81 × 1.65 × 7.88 | 182 | 173 | 165 | 143 | 135 | LUD-15-33 |
| 12 | 1.5 | 1.5 | 1.05 | | | | | | | | | |
| 12 | 6.0 | 6.0 | 3.6 | 43 | 166 | 3.81 × 2.56 × 8.66 | 254 | 242 | 233 | 203 | 191 | LUD-16-33 |
| 12 | 2.5 | 2.5 | 1.5 | | | | | | | | | |
| 15V ±5% ADJ., 15V ±5% ADJ. | | | | | | | | | | | | |
| 15 | 3.0 | 3.0 | 2.1 | 43 | 166 | 3.81 × 1.65 × 7.88 | 182 | 173 | 165 | 143 | 135 | LUD-15-44 |
| 15 | 1.0 | 1.0 | 0.7 | | | | | | | | | |
| 15 | 5.0 | 5.0 | 4.0 | 43 | 166 | 3.81 × 2.56 × 8.66 | 254 | 242 | 233 | 203 | 191 | LUD-16-44 |
| 15 | 2.0 | 2.0 | 1.2 | | | | | | | | | |

Triple Output. LU Series.

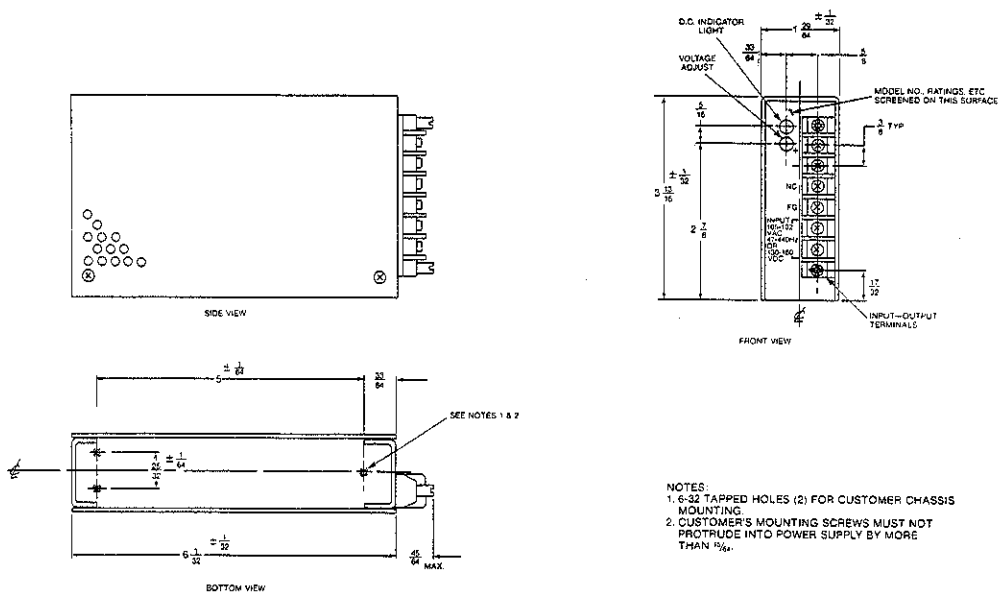
| VOLT Vo | MAX CURRENT AT OPERATING TEMPERATURE OF | | | COMPLETE ELEC. SPEC. PG. | COMPLETE MECH. SPEC. PG. | DIMENSIONS (inches) | QTY. 1 | QTY. 10 | PRICE | | | MODEL |
|--------------------------------|---|------|------|-----------------------------------|-----------------------------------|------------------------|-----------|------------|------------|-------------|-------------|-------------|
| | 40°C | 50°C | 60°C | | | | | | QTY. 25 | QTY. 100 | QTY. 250 | |
| 5V ±5% ADJ., ±12V FIXED | | | | | | | | | | | | |
| 5 | 4.0 | 4.0 | 2.8 | 43 | 166 | 1.81 × 4.50 × 7.20 | \$196 | \$187 | \$180 | \$155 | \$147 | LUT-13-133 |
| +12 | 3.0 | 3.0 | 2.1 | | | | | | | | | |
| -12 | 0.3 | 0.3 | 0.21 | | | | | | | | | |
| 5 | 5.0 | 5.0 | — | 43 | 166 | 4.50 × 1.48 × 7.06 | 187 | 178 | 171 | 149 | 140 | LUT-6-5122 |
| +12 | 1.0 | 1.0 | — | | | | | | | | | |
| -12 | 0.5 | 0.5 | — | | | | | | | | | |
| 5 | 8.0 | 8.0 | 5.6 | 43 | 166 | 4.53 × 2.15 × 8.66 | 286 | 273 | 261 | 227 | 213 | LUT-14-133 |
| +12 | 4.0 | 4.0 | 2.5 | | | | | | | | | |
| -12 | 0.5 | 0.5 | 0.35 | | | | | | | | | |
| 5 | 12.0 | 9.6 | — | 43 | 166 | 4.54 × 2.18 × 8.66 | 286 | 273 | 261 | 227 | 213 | LUT-12-5122 |
| +12 | 1.5 | 1.2 | — | | | | | | | | | |
| -12 | 0.5 | 0.4 | — | | | | | | | | | |
| 5V ±5% ADJ., ±15V FIXED | | | | | | | | | | | | |
| 5 | 5.0 | 5.0 | — | 43 | 166 | 4.50 × 1.48 × 7.06 | 187 | 178 | 171 | 149 | 140 | LUT-6-5152 |
| +15 | 1.0 | 1.0 | — | | | | | | | | | |
| -15 | 0.5 | 0.5 | — | | | | | | | | | |
| 5 | 12.0 | 9.6 | — | 43 | 166 | 4.54 × 2.18 × 8.66 | 286 | 273 | 261 | 227 | 213 | LUT-12-5152 |
| +15 | 1.5 | 1.2 | — | | | | | | | | | |
| -15 | 0.5 | 0.4 | — | | | | | | | | | |

NOTE: Second output of LUT models are fixed at 1%. Third output of LUT models are fixed at 5%.

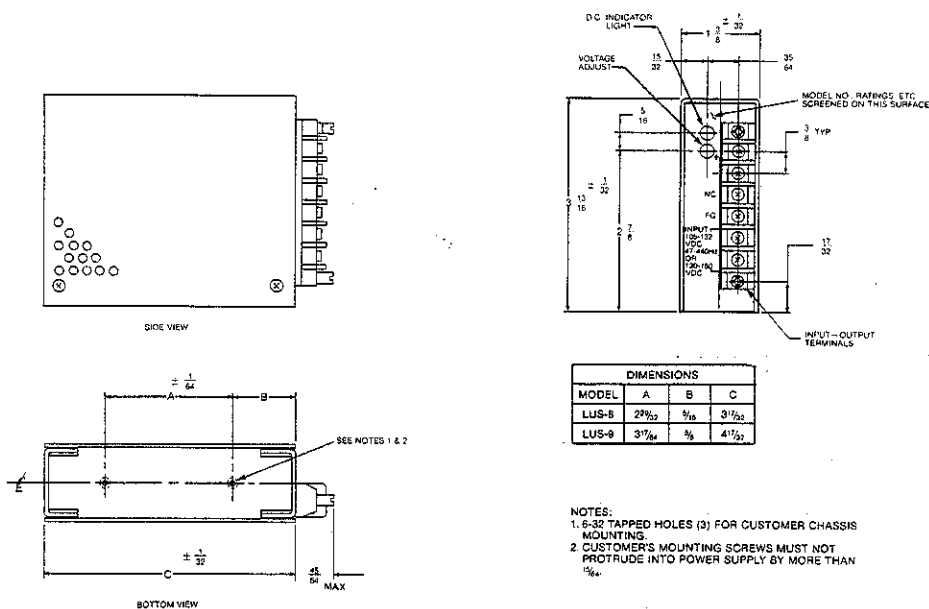
PART V — MECHANICAL DRAWINGS

LUS-8A, LUS-9A, LUS-10A, AND LUS-11

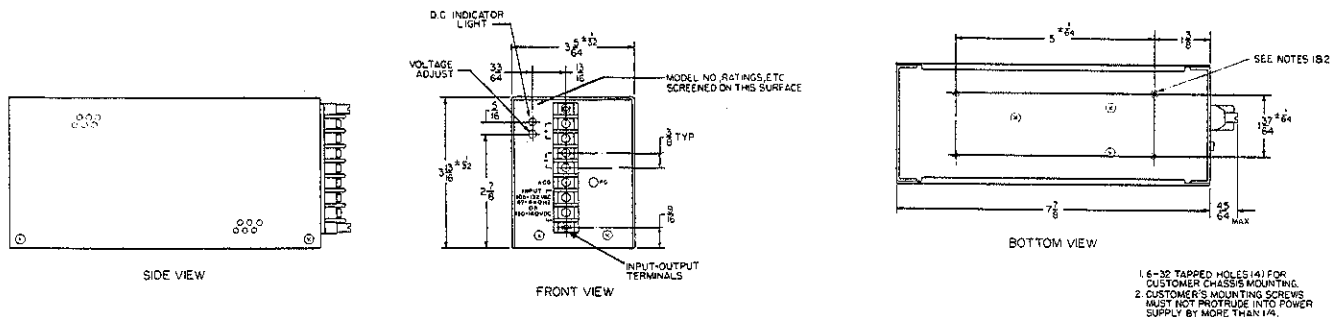
LUS-10A



LUS-8A LUS-9A



LUS-11 Series



PART V — MECHANICAL DRAWINGS

LUD-15, LUD-16, LUT-6, LUT-12, LUT-13, AND LUT-14

