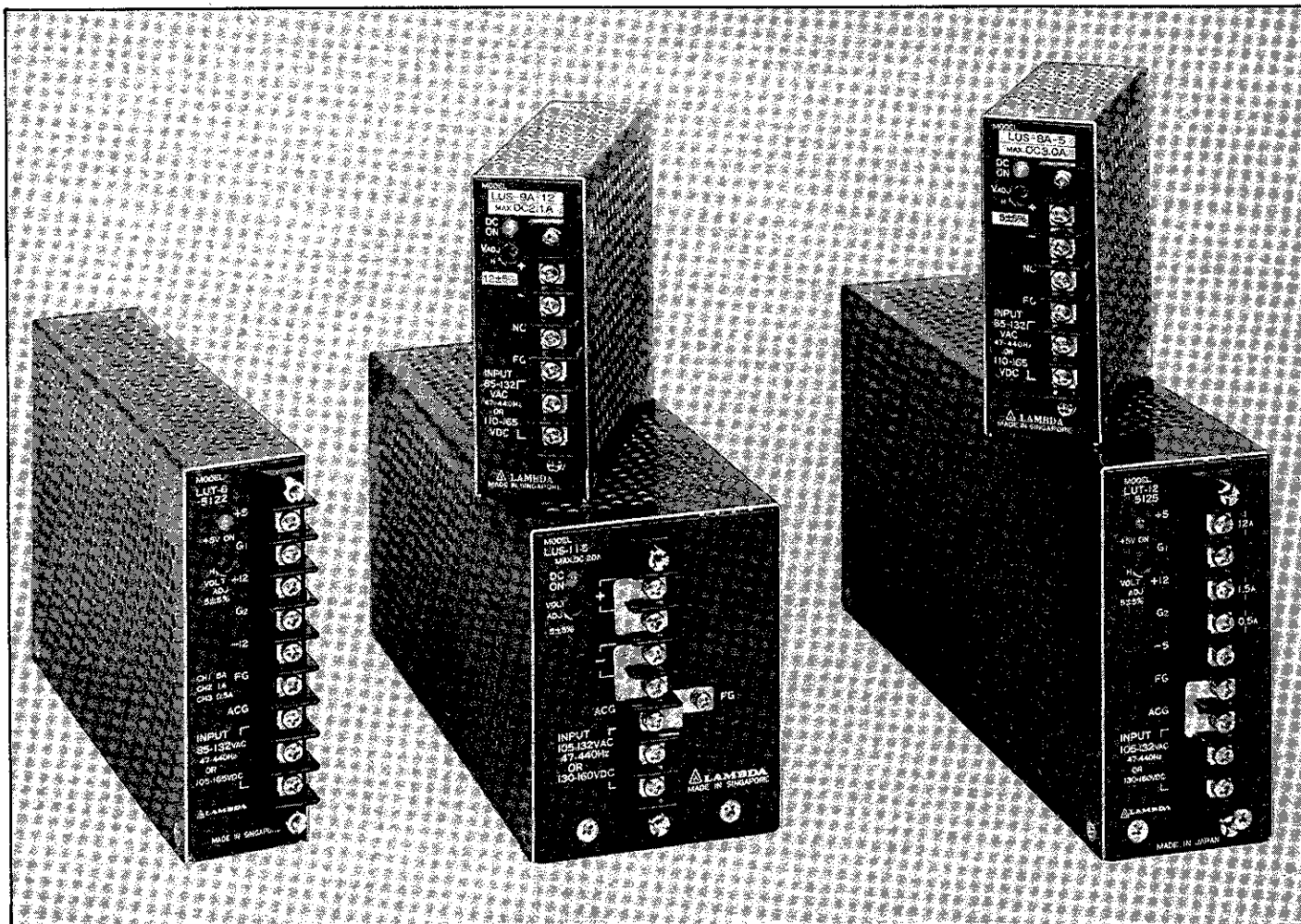


ONE YEAR COMMERCIAL SWITCHING

Lambda LU and LUA series



Features — LU and LUA series

1 year guarantee

1/3 the weight, 60% the size, twice the efficiency of low-cost linears

27 single, 10 dual, 15 triple output models

Up to 28V; up to 20 Amps

Indicator light

Convection cooled-no fans or blower needed

Heavy duty barrier strip

Truly modular for custom configurations

Built in OV standard on LUS-9A LUS-10A, LUS-11 and main output of LUT-12 packages

UL—Recognized
CSA—Certified

LU Series Specifications

DC Output

Voltage range shown in tables.

Regulated Voltage

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

regulation, load 0.85% single and dual output models, and (all outputs regulated on LUT's, no cross regulation) main output of LUT-12, LUT-13 and LUT-14 models. 0.8% main output of LUT-6 models, 1.0% second output. 2.0% third output of LUT-6, LUT-12, LUT-13 and LUT-14 models (0 to full load, no preload required).

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

temp. coeff. 0.02%/°C (0.04%/°C for second and third outputs of LUT models; less than 0.02%/°C for second and main output and less than 0.04%/°C for third output on LUT-13 and LUT-14 models.)

AC Input

line 85-132 VAC, 47-440 Hz on LU models. 105-132 VAC, 47-440 Hz on LUS-11.

efficiency minimum 62% for LUS-8A models. 63% for LUT-6-5125. 66% for LUS-9A, LUD-15-13 models. 67% for LUT-6-5122. 68% for LUT-12-5125. 70% for LUS-10A, LUT-6-5152, LUT-12-5122, LUT-13 and LUT-14 models. 71% for LUD-15-16. 72% for LUD-15-31 and LUS-11 models. 73% for LUD-15-33. 74% for LUD-15-44 and LUD-16-13, — 16, — 33 models. 75% for LUD-16-31, — 44 models.

DC Input LUS-11, LUT-6, LUT-12 models 130-160 VDC. LUD-15, LUD-16, LUT-13, LUT-14 110-175 VDC. All other models 110-165 VDC.

Overshoot

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

Ambient Operating Temperature

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

Storage Temperature

-30°C to +85°C

Overload Protection

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.

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 100 VAC input or 130 VDC input at 60 Hz — (117 VAC for LUS-11).

Overvoltage Protection

Overvoltage protection is standard on LUS-9A, LUS-10A, LUS-11 and main output of LUT models. For other models and second and third outputs of LUT models, see pages 66-67.

Cooling

Convection cooled, no fans or blowers needed.

DC Output Controls

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

Output Status Indicator

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

Mounting

One mounting surface, one mounting position.

Input and Output Connections

Heavy duty terminal block on front of chassis.

PHYSICAL DATA

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

*Excluding terminal block

Finish

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

Accessories

Overvoltage protectors available—see pages 66-67. (Built-in on LUS-9A, LUS-10A, LUS-11 and main output of LUT models.)

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.

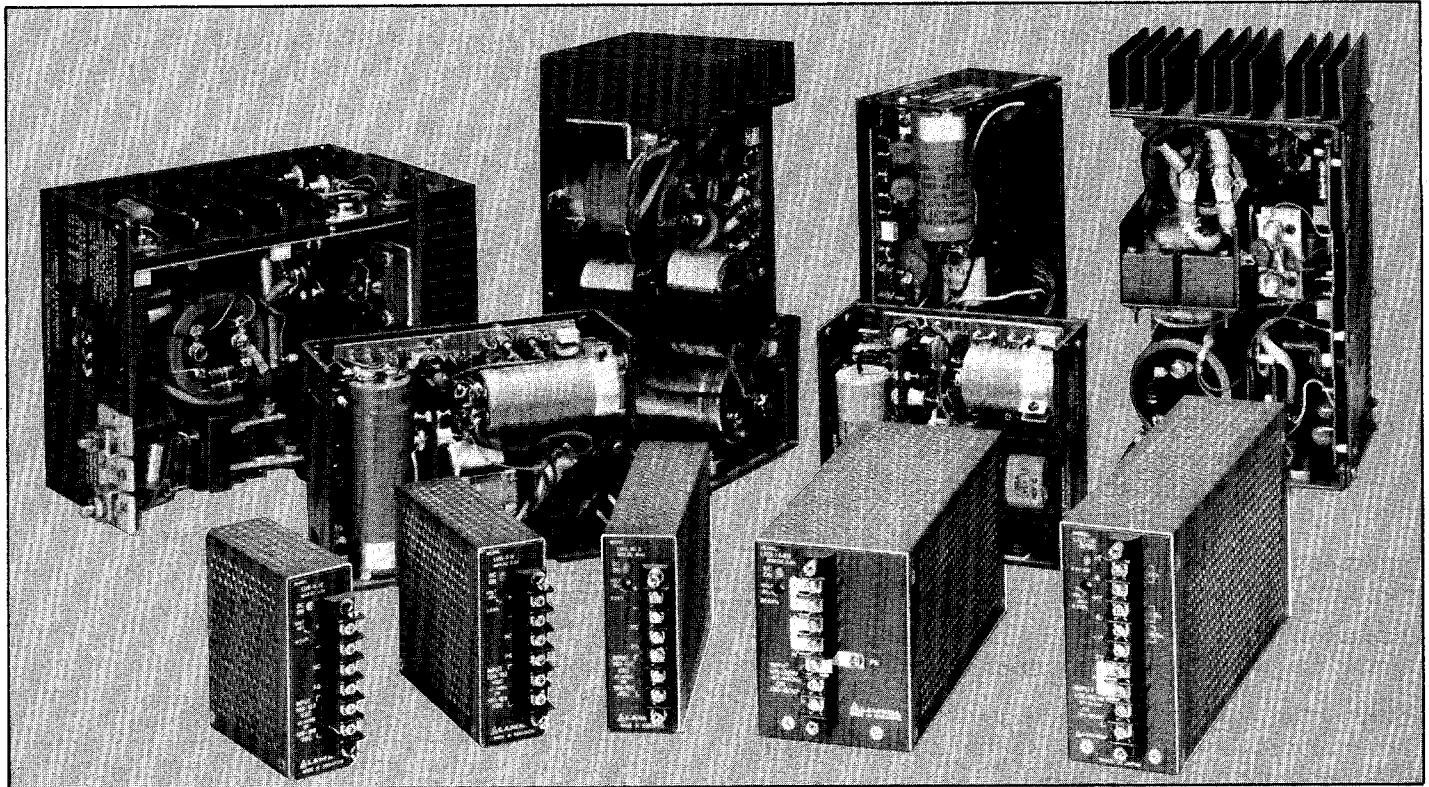
UL-Recognized

CSA—Listed (LUT-13, 14, LUD-15, 16 under evaluation).

ONE YEAR COMMERCIAL SWITCHING

Lambda

LU series



One year commercial switching selector guide

AC input. Models LU

Triple Output.

MODEL	VOLT V _o	REGULATION (LINE, LOAD)	RIPPLE (mV RMS)	MAX CURRENT (AMPS AT)			COMPLETE ELEC. SPEC. PG	PKG SIZE	DIMENSIONS (Inches)	COMPLETE MECH. SPEC. PG	QTY. 1	PRICE QTY. 100	QTY. 1000
				40° C	50° C	60° C							
5V ±5% ADJ. +12V, -5V⁽³⁾													
LUT-13-131	+5	0.4%, 0.85%	15	4.0	4.0	2.8	21	13	1.81 x 4.50 x 7.20	114	\$132.50	\$112.75	\$86.25
	+12	0.4%, 1.0%	15	3.0	3.0	2.1							
	-5	0.4%, 2.0%	15	0.3	0.3	0.21							
LUT-6-5125	+5	0.4%, 0.8%	15	5.0	5.0	—	21	6	4.50 x 1.48 x 7.06	115	127.50	108.50	82.75
	+12	0.4%, 1.0%	15	1.0	1.0	—							
	-5	0.4%, 2.0%	15	0.5	0.5	—							
LUT-14-131	+5	0.4%, 0.85%	15	8.0	8.0	5.6	21	14	4.53 x 2.15 x 8.66	114	193.75	164.75	126.00
	+12	0.4%, 1.0%	15	4.0	4.0	2.8							
	-5	0.4%, 2.0%	15	0.5	0.5	0.35							
LUT-12-5125	+5	0.4%, 0.85%	15	12.0	9.6	—	21	12	4.54 x 2.18 x 8.66	116	193.75	164.75	126.00
	+12	0.4%, 1.0%	15	1.5	1.2	—							
	-5	0.4%, 2.0%	15	0.5	0.4	—							
5V ±5% ADJ. ±12V⁽³⁾													
LUT-13-133	+5	0.4%, 0.85%	15	4.0	4.0	2.8	21	13	1.81 x 4.50 x 7.20	114	132.50	112.75	86.25
	+12	0.4%, 1.0%	15	3.0	3.0	2.1							
	-12	0.4%, 2.0%	15	0.3	0.3	0.11							
LUT-6-5122	+5	0.4%, 0.8%	15	5.0	5.0	—	21	6	4.50 x 1.48 x 7.06	115	127.50	108.50	82.75
	+12	0.4%, 1.0%	15	1.0	1.0	—							
	-12	0.4%, 2.0%	15	0.5	0.5	—							
LUT-14-133	+5	0.4%, 0.85%	15	8.0	8.0	5.6	21	14	4.53 x 2.15 x 8.66	114	193.75	164.75	126.00
	+12	0.4%, 1.0%	15	4.0	4.0	2.5							
	-12	0.4%, 2.0%	15	0.5	0.5	0.35							

One year commercial switching selector guide

AC input. Models LU and LY. Triple Output.

MODEL	VOLT V _o	REGULATION (LINE, LOAD)	RIPPLE (mV RMS)	MAX CURRENT (AMPS AT)			COMPLETE ELEC. SPEC. PG	PKG SIZE	DIMENSIONS (Inches)	COMPLETE MECH. SPEC. PG	QTY. 1	PRICE	
				40° C	50° C	60° C						QTY. 100	QTY. 1000
5V ±5% ADJ. ±12V (Cont'd)													
LUT-12-5122	+5	0.4%, 0.85%	15	12.0	9.6	—	21	12	4.54 x 2.18 x 8.66	116	\$193.75	\$164.75	\$126.00
	+12	0.4%, 1.0%	15	1.5	1.2	—							
	-12	0.4%, 2.0%	15	0.5	0.4	—							
5V ±5% ADJ. +15V, -5V⁽³⁾													
LUT-14-141	+5	0.4%, 0.85%	15	8.0	8.0	5.6	21	14	4.53 x 2.15 x 8.66	114	193.75	164.25	126.00
	+15	0.4%, 1.0%	15	3.0	3.0	2.1							
	-5	0.4%, 2.0%	15	0.5	0.5	0.35							
5V ±5% ADJ. ±15V⁽³⁾													
LUT-13-144	+5	0.4%, 0.85%	15	4.0	4.0	2.8	21	13	1.81 x 4.50 x 7.20	114	132.50	112.75	86.25
	+15	0.4%, 1.0%	15	2.4	2.4	1.68							
	-15	0.4%, 2.0%	15	0.3	0.3	0.21							
LUT-6-5152	+5	0.4%, 0.8%	15	5.0	5.0	—	21	61	4.50 x 1.48 x 7.06	115	127.50	108.50	82.75
	+15	0.4%, 1.0%	15	1.0	1.0	—							
	-15	0.4%, 2.0%	15	0.5	0.5	—							
5V ±5% ADJ. +24V -12V⁽³⁾													
LUT-13-163	+5	0.4%, 0.85%	15	3.0	3.0	2.1	21	13	1.81 x 4.50 x 7.20	114	132.50	112.75	86.25
	+24	0.4%, 1.0%	15	1.8	1.8	1.26							
	-12	0.4%, 2.0%	15	0.3	0.3	0.21							
LUT-14-163	+5	0.4%, 0.85%	15	8.0	8.0	5.6	21	14	4.53 x 2.15 x 8.66	114	193.75	164.25	126.00
	+24	0.4%, 1.0%	15	2.0	2.0	1.4							
	-12	0.4%, 2.0%	15	0.5	0.5	0.35							
12V ±5% ADJ. +12V -5V⁽³⁾													
LUT-13-331	+12	0.4%, 0.85%	15	1.7	1.7	1.19	21	13	1.81 x 4.50 x 7.20	114	132.50	112.75	86.25
	+12	0.4%, 1.0%	15	3.0	3.0	2.1							
	-5	0.4%, 2.0%	15	0.3	0.3	0.21							
12V ±5% ADJ. +24V -12V⁽³⁾													
LUT-13-363	+12	0.4%, 0.85%	15	1.2	1.2	0.84	21	13	1.81 x 4.50 x 7.20	114	132.50	112.75	86.25
	+24	0.4%, 1.0%	15	1.8	1.8	1.26							
	-12	0.4%, 2.0%	15	0.3	0.3	0.21							

One year commercial switching selector guide

AC input. Models LU, LUA and LY. Dual Output.

MODEL	VOLT Vo	REGULATION (LINE, LOAD)	RIPPLE (mV RMS)	MAX CURRENT (AMPS AT)			COMPLETE ELEC. SPEC. PG	PKG SIZE	DIMENSIONS (Inches)	COMPLETE MECH. SPEC. PG	QTY. 1	PRICE QTY. 100	QTY. 1000
				40° C	50° C	60° C							
+5V ±5% ADJ. +12V ±5% ADJ.													
LUD-15-13	+5	0.4%, 0.85%	15	5.0	5.0	3.5	21	15	3.81 x 1.65 x 7.88	114	122.50	104.25	79.75
	+12	0.4%, 0.85%	15	2.1	2.1	1.47							
LUD-16-13	+5	0.4%, 0.85%	15	10.0	10.0	6.0	21	16	3.81 x 2.56 x 8.66	114	173.50	147.50	112.75
	+12	0.4%, 0.85%	15	4.0	4.0	2.4							
+5V ±5% ADJ. +24V ±5% ADJ.													
LUD-15-16	+5	0.4%, 0.85%	15	5.0	5.0	3.5	21	15	3.81 x 1.65 x 7.88	114	122.50	104.25	79.75
	+24	0.4%, 0.85%	15	1.0	1.0	0.7							
LUD-16-16	+5	0.4%, 0.85%	15	10.0	10.0	6.0	21	16	3.81 x 2.56 x 8.66	114	173.50	147.50	112.75
	+24	0.4%, 0.85%	15	2.0	2.0	1.2							
±12V⁽³⁾													
LYD-X-122		0.1%, 100 mV	15	3.0	2.5	2.0	19	X	7 x 4-7/8 x 2-3/4	121	319.00	287.00	239.00
+12V ±5% ADJ. 5V ±5% ADJ.													
LUD-15-31	+12	0.4%, 0.85%	15	4.0	4.0	2.8	21	15	3.81 x 1.65 x 7.88	114	122.50	104.25	79.75
	+5	0.4%, 0.85%	15	2.0	2.0	1.4							
LUD-16-31	+12	0.4%, 0.85%	15	8.0	8.0	4.8	21	16	3.81 x 2.56 x 8.66	114	173.50	147.50	112.75
	+5	0.4%, 0.85%	15	2.0	2.0	1.2							
+12V ±5% ADJ. +12V ±5% ADJ.													
LUD-15-33	+12	0.4%, 0.85%	15	3.0	3.0	2.1	21	15	3.81 x 1.65 x 7.88	114	122.50	104.25	79.75
	+12	0.4%, 0.85%	15	1.5	1.5	1.05							
LUD-16-33	+12	0.4%, 0.85%	15	6.0	6.0	3.6	21	16	3.81 x 2.56 x 8.66	114	173.50	147.50	112.75
	+12	0.4%, 0.85%	15	2.5	2.5	1.5							
±15V⁽³⁾													
LYD-X-152		0.1%, 100 mV	15	3.0	2.5	2.0	19	X	7 x 4-7/8 x 2-3/4	121	319.00	287.00	239.00
+15V ±5% ADJ. +15V ±5% ADJ.													
LUD-15-44	+15	0.4%, 0.85%	15	3.0	3.0	2.1	21	15	3.81 x 1.65 x 7.88	114	122.50	104.25	79.75
	+15	0.4%, 0.85%	15	1.0	1.0	0.7							
LUD-16-44	+15	0.4%, 0.85%	15	5.0	5.0	3.0	21	16	3.81 x 2.56 x 8.66	114	173.50	147.50	112.75
	+15	0.4%, 0.85%	15	2.0	2.0	1.2							

AC input. Models LU, LUA and . Single Output.

MODEL	VOLT Vo	REGULATION (LINE, LOAD)	RIPPLE (mV RMS)	MAX CURRENT (AMPS AT)			COMPLETE ELEC. SPEC. PG	PKG SIZE	DIMENSIONS (Inches)	COMPLETE MECH. SPEC. PG	QTY. 1	PRICE QTY. 100	QTY. 1000
				40° C	50° C	60° C							
5 VOLTS ±5% ADJ.													
LUS-8A-5		0.4%, 0.85%	15	3.0	2.1	1.5	21	8	3.82 x 1.38 x 3.54	115	48.00	40.80	31.20
LUS-9A-5		0.4%, 0.85%	15	5.0	3.5	2.5	21	9	3.82 x 1.38 x 4.53	115	73.50	62.50	47.80
LUS-10A-5		0.4%, 0.85%	15	10.0	7.0	5.0	21	10	3.82 x 1.46 x 6.02	115	100.00	85.00	65.00
LUS-11-5		0.4%, 0.85%	15	20.0	14.0	—	21	11	3.82 x 3.08 x 7.88	116	141.75	120.50	92.15

One year commercial switching selector guide

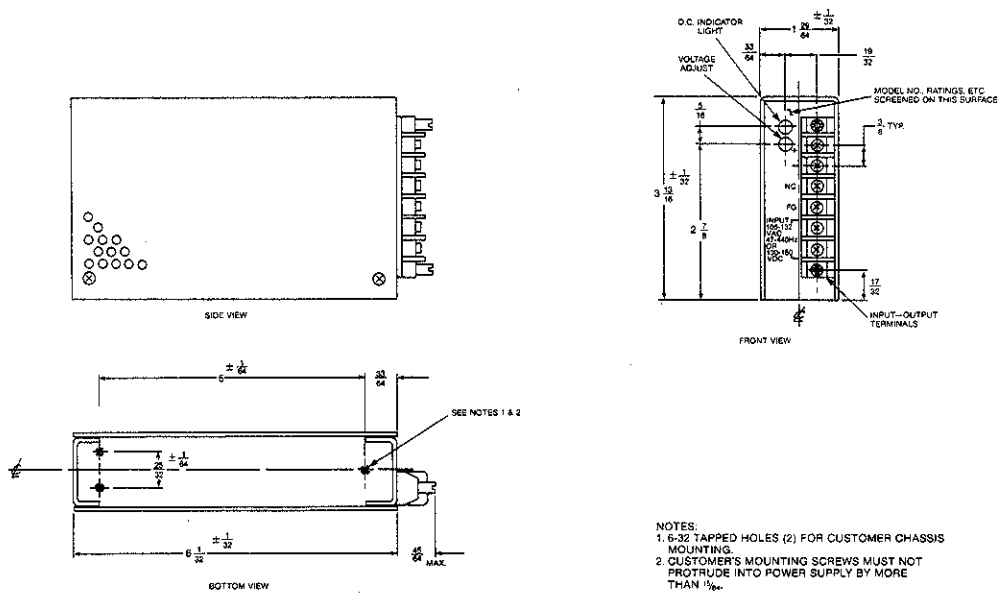
AC input. Models LU, LUA and LY. Single Output.

MODEL	VOLT V _o	REGULATION (LINE, LOAD)	RIPPLE (mV RMS)	MAX CURRENT (AMPS AT)			COMPLETE ELEC. SPEC. PG	PKG SIZE	DIMENSIONS (Inches)	COMPLETE MECH. SPEC. PG	QTY. 1	PRICE	
				40° C	50° C	60° C						QTY. 100	QTY. 1000
9 VOLTS ±5% ADJ.													
LUS-8A-9		0.4%, 0.85%	15	1.7	1.2	0.9	21	8	3.82 x 1.38 x 3.54	115	48.00	40.80	31.20
LUS-9A-9		0.4%, 0.85%	15	2.8	2.0	1.4	21	9	3.82 x 1.38 x 4.53	115	73.50	62.50	47.80
LUS-10A-9		0.4%, 0.85%	15	5.6	3.9	2.8	21	10	3.82 x 1.46 x 6.02	115	100.00	85.00	65.00
12 VOLTS ±5% ADJ.													
LUS-8A-12		0.4%, 0.85%	15	1.3	0.9	0.7	21	8	3.82 x 1.38 x 3.54	115	48.00	40.80	31.20
LUS-9A-12		0.4%, 0.85%	15	2.1	1.5	1.1	21	9	3.82 x 1.38 x 4.53	115	73.50	62.50	47.80
LUS-10A-12		0.4%, 0.85%	15	4.2	2.9	2.1	21	10	3.82 x 1.46 x 6.02	115	100.00	85.00	65.00
LUS-11-12		0.4%, 0.85%	15	8.5	6.0	—	21	11	3.82 x 3.08 x 7.88	116	141.75	120.50	92.15
15 VOLTS ±5% ADJ.													
LUS-8A-15		0.4%, 0.85%	15	1.0	0.7	0.5	21	8	3.82 x 1.38 x 3.54	115	48.00	40.80	31.20
LUS-9A-15		0.4%, 0.85%	15	1.7	1.2	0.9	21	9	3.82 x 1.38 x 4.53	115	73.50	62.50	47.80
LUS-10A-15		0.4%, 0.85%	15	3.4	2.4	1.7	21	10	3.82 x 1.46 x 6.02	115	100.00	85.00	65.00
LUS-11-15		0.4%, 0.85%	15	7.0	4.9	—	21	11	3.82 x 3.08 x 7.88	116	141.75	120.50	92.15
24 VOLTS ±5% ADJ.													
LUS-8A-24		0.4%, 0.85%	15	0.6	0.4	0.4	21	8	3.82 x 1.38 x 3.54	115	48.00	40.80	31.20
LUS-9A-24		0.4%, 0.85%	15	1.0	0.7	0.6	21	9	3.82 x 1.38 x 4.53	115	73.50	62.50	47.80
LUS-10A-24		0.4%, 0.85%	15	2.1	1.5	1.0	21	10	3.82 x 1.46 x 6.02	115	100.00	85.00	65.00
LUS-11-24		0.4%, 0.85%	15	4.5	3.2	—	21	11	3.82 x 3.08 x 7.88	116	141.75	120.50	92.15
28 VOLTS ±5% ADJ.													
LUS-8A-28		0.4%, 0.85%	15	0.6	0.4	0.3	21	8	3.82 x 1.38 x 3.54	115	48.00	40.80	31.20
LUS-9A-28		0.4%, 0.85%	15	0.9	0.6	0.5	21	9	3.82 x 1.38 x 4.53	115	73.50	62.50	47.80
LUS-10A-28		0.4%, 0.85%	15	1.8	1.3	0.9	21	10	3.82 x 1.46 x 6.02	115	100.00	85.00	65.00
LUS-11-28		0.4%, 0.85%	15	3.6	2.5	—	21	11	3.82 x 3.08 x 7.88	116	141.75	120.50	92.15
48 VOLTS ±5% ADJ.													
LUS-8A-48		0.4%, 0.85%	15	0.35	0.24	0.18	21	8	1.38 x 3.82 x 4.52	115	48.00	40.80	31.20
LUS-9A-48		0.4%, 0.85%	15	0.5	0.30	0.25	21	9	1.38 x 3.82 x 4.52	115	73.50	62.50	47.80
LUS-10A-48		0.4%, 0.85%	15	1.1	0.7	0.55	21	10	1.38 x 3.82 x 4.52	115	100.00	85.00	65.00
LUS-11-48		0.4%, 0.85%	15	1.1	0.7	—	19	11	1.38 x 3.82 x 4.52	116	141.75	120.50	92.15

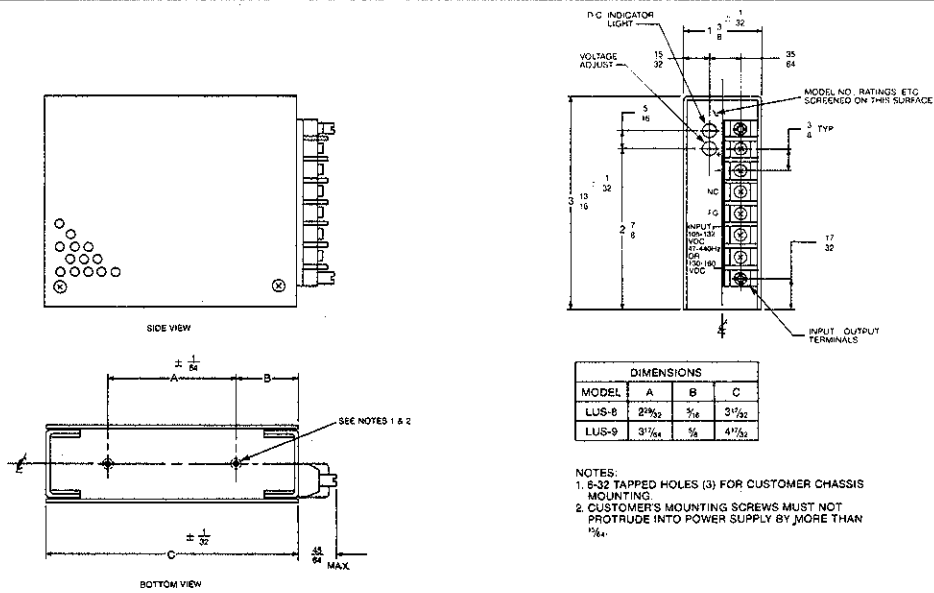
- NOTES: 1. Ratings are for LY series when cover not used. When cover is used derate by 10%.
 2. Dimensions are without cover.
 3. ± outputs are fixed and preset at factory to be within 100 mV of nominal and within 100 mV of each other at no load, 25° C ambient.

PART IV—DIMENSIONAL DRAWINGS LUS-8A, LUS-9A, LUS-10A, AND LUT-6

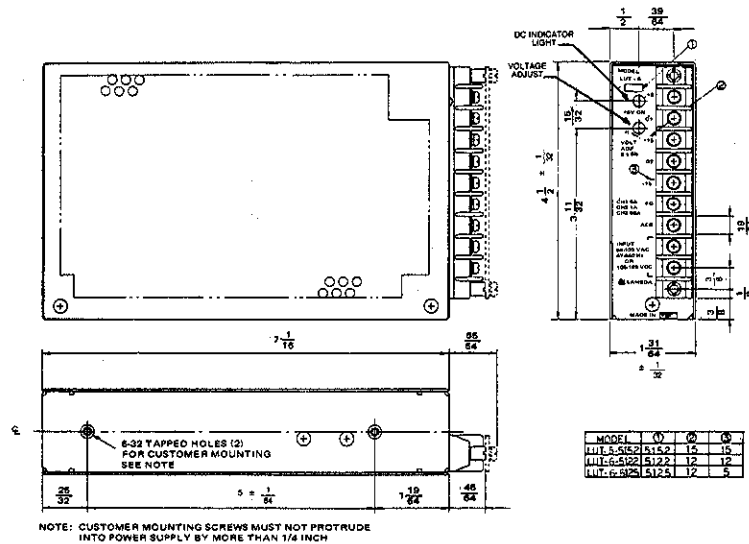
LUS-10A



LUS-8A LUS-9A



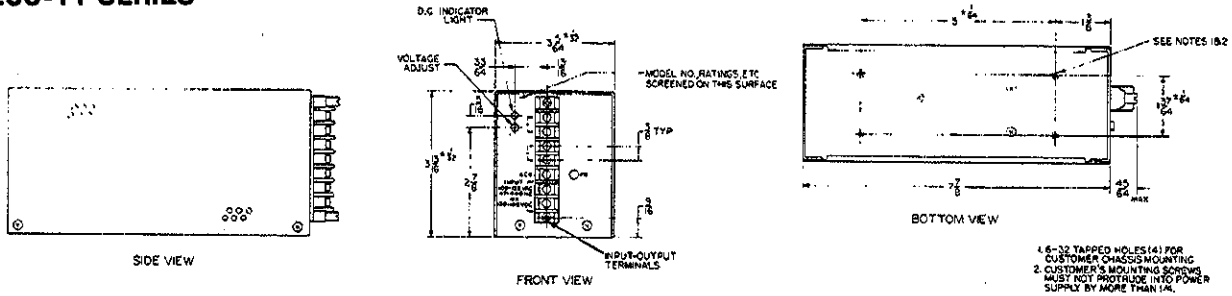
LUT-6



PART IV—DIMENSIONAL DRAWINGS

LUS-11, LUT-12, and LYT-D SERIES POWER SUPPLIES

LUS-11 SERIES



LUT-12 SERIES

