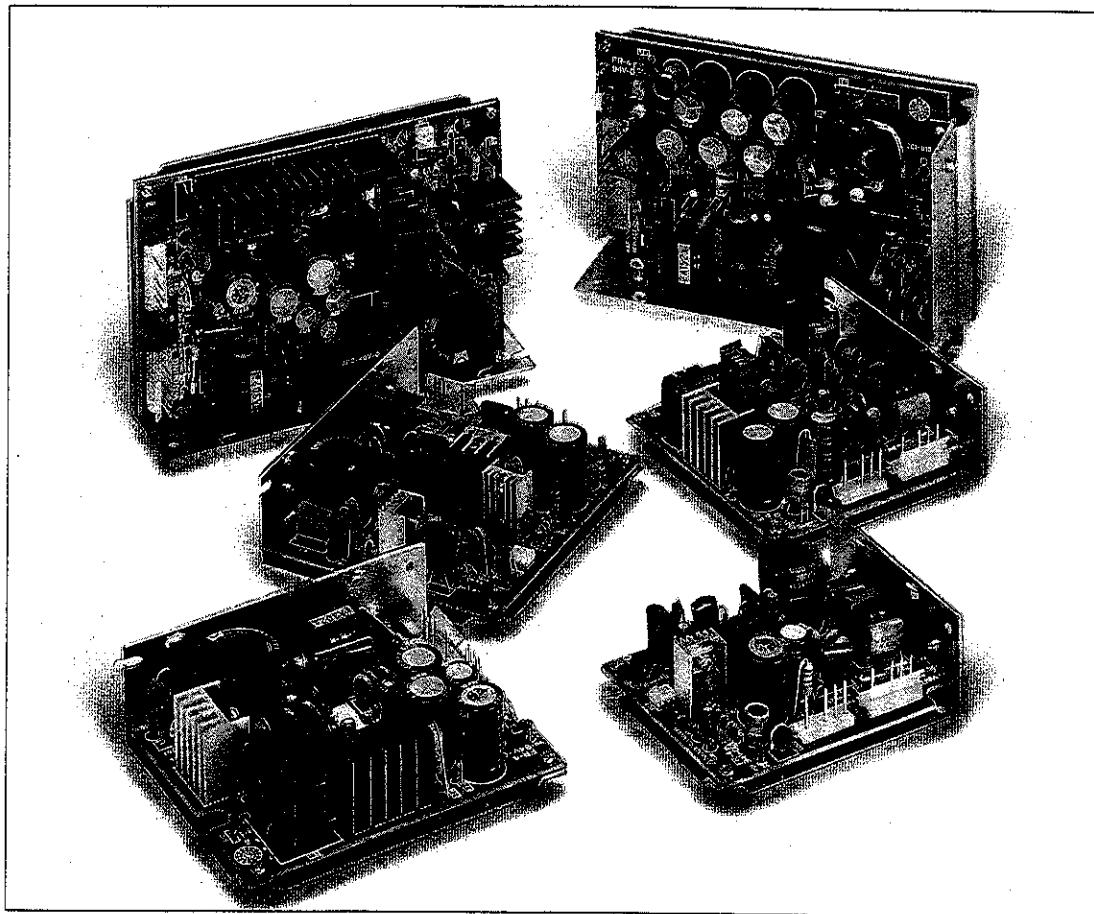


Part I – AC-to-DC Power Supplies

LAMBDA'S LV and LV-E SERIES



Lowest Cost, Universal Inputs, Single and Triple Outputs

Lambda's low cost LV/LV-E Series is available in 64 single and triple output models. The LV-E features universal input of 105-265VAC and UL/CSA/TUV approvals. The LV Series features AC input of 85-265VAC and UL/CSA approvals.

Lambda's LV/LV-E Series is ideal for many OEM applications. They feature molex-type input-output connectors for ease in wiring and installation in OEM equipment. Indicator lights provide quick verification of output voltages for in-house and field service personnel. And all models are in stock for one day delivery.

LV AND LV-E SERIES SPECIFICATIONS

AC Input

line 85 to 132VAC, 47-440Hz on all LV models. 105 to 265VAC, 47-440Hz on LVS-E and LVT-40E, 41E models. The LVS-45E is jumper selectable for 95 to 132VAC or 187 to 265VAC operation (factory pre-wired for 220V operation). 85 to 265VAC, 47-440Hz on all LVT-38E, 39E, 42E models.

Efficiency

62% minimum on all LVS, LVT, LVT-40E, 41E and LVS-E models. 64% typical on LVT-38E, 39E, 42E models.

DC Input

110 to 175VDC for LV models. 150 to 370VDC for LVS-E and LVT-40E, 41E. LVS-45E allows DC input (260 to 370VDC) only, when wired for 220VAC operation. 110 to 330VDC for LVT-38E, 39E, 42E.

DC Output

Voltage range shown in tables.

Regulated Voltage

regulation, line 0.4% for input variations from 85 to 132VAC or 132 to 85VAC on all LV models. 0.4% for input variations from 105 to 265VAC or 265 to 105VAC on LVS-E, LVT-40E, 41E models. (LVS-45E models: 0.4% for input variations from 95 to 132VAC or 132 to 95VAC when wired for 110V operation; 187 to 265VAC or 265 to 187VAC when wired for 220V operation.) 1.0% for input variations from 85 to 265VAC or 265 to 85VAC on LVT-38E, 39E, 42E models.
regulation, load 0.8% for LVS, LVS-E and LVT-40E, 41E models. 2% for LVT-38E, 39E, 42E models (from no load to full load and full load to no load).

ripple and noise

(20MHz Bandwidth) 15mV RMS for all models with either positive or negative terminal grounded. 150mV pk-pk for 5V models; 300mV pk-pk for 12V through 48V models and second and third outputs of LVT models.
temperature coefficient 0.02%/°C for LVS, LVS-E, LVT-40E, 41E models and 5V output of LVT models. 0.03%/°C for other two outputs of LVT models and for main output of LVT-38E, 39E, 42E. 0.05%/°C on other two outputs of these models.

Hold Up Time

Output will remain within regulation limits for 16 msec. typical for all models (20 msec. typical at 100VAC for LVT-38E, 39E, 42E models) after loss of AC power at full load with nominal output voltage and 85VAC input at 60Hz (110V RMS, 60Hz on LVS-E models). On LVS-45E this is true at 105V RMS when wired for 110V operation, or 210V RMS when wired for 220V operation.

Overload Protection

Automatic electronic current limiting circuit with automatic recovery, limits short circuit output current to a safe, preset value, thereby protecting the load as well as the power supply when direct shorts occur. Sustained short circuit operation for more than 30 seconds may cause damage to the power supply.

Overvoltage Protection

Standard on all single output LVS-44, LVS-45, LVS-44E, LVS-45E and on main output of LVT-38E, 39E, 42E models.

Overshoot

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

Input Fuse

A 2 amp slo-blo fuse in the AC input line protects the input wiring to the power supply. Overload of power supply does not cause fuse failure.

Cooling

Convection cooled, no fans or blowers needed.

Operating Temperature Range

0°C to 60°C with suitable derating above 50°C. LVT-40E and 41E derate above 40°C. 0°C to 50°C for LVT-41. (See Tables on pgs. 64-69.)

Storage Temperature

-30°C to +85°C.

DC Output Controls

Simple screwdriver adjustment over the entire voltage range of single output models. Triple output models are fixed.

Output Status Indicator

LED indicates presence of voltage on single output models and on +5V output of LVT-40, 41.

Input and Output Connections

Molex connectors. AC input and DC output - Molex Type. Consult factory for mating connector availability.

Mounting

Two mounting surfaces, three mounting positions. Air circulation may be required when mounting in confined areas. Two mounting positions on LVT-38E, 39E, 42E.

Finish

Plated steel chassis on LV models and LVT-38E, 39E, 42E. Other LV-E models are painted gray.

Physical Data

Package Model	Lbs. Net	Lbs. Ship	Size Inches
LVS-42, 42E	0.44	0.52	1.38 × 3.82 × 3.13
LVS-43, 43E	0.55	0.64	1.38 × 3.82 × 3.88
LVS-44, 44E	0.70	0.82	1.38 × 3.82 × 4.59
LVS-45, 45E	0.86	1.00	1.46 × 3.82 × 6.26
LVT-38E	0.35	0.42	1.38 × 1.97 × 4.33
LVT-39E	0.44	0.52	1.57 × 2.36 × 4.33
LVT-40, 40E	0.84	1.00	1.38 × 3.82 × 4.47
LVT-41, 41E	1.00	1.13	1.46 × 3.82 × 6.05
LVT-42E	0.66	0.75	1.57 × 2.36 × 5.91

Accessories

For rack adapters and other accessories see page 152.

Guarantee

90 day guarantee for LV Series and one year guarantee for LV-E series includes labor as well as parts. Guarantee applies to operation at full published specifications at end of guarantee period.

Safety Agency Approvals

All models are UL recognized and CSA certified, except for the LVT-38E which is under evaluation for CSA. In addition, all models within the LV-E Series are TUV approved except for the LVT-38E, 39E and 42E which are under evaluation.

Commercial Ratings Table – Single Output

K SERIES
 • PCB Mount
 • Small Footprint
 • High Density

V SERIES
 • Lowest Cost 110VAC Input
 • PCB and Chassis Mount
 • Meets FCC Curve B on Duals and Triples

Z SERIES
 • Lowest Cost 110/220VAC Input
 • PCB Construction
 • Meets FCC and VDE Curve B

LV SERIES
 • Chassis Mount
 • 110/220VAC Input
 • Molex Connections

LS SERIES
 • 110VAC Input
 • Chassis Mount
 • High Density

25°C	MAX CURRENT (AMPS) AT AMBIENT TEMPERATURE OF					V _{out} ADJ. RANGE	COMPLETE ELEC. SPEC. PG.	UNIT PRICE PER DELIVERED QUANTITY					MODEL
	40°C	50°C	60°C	71°C	1			10	25	100	250		
SINGLE OUTPUT. 110VAC INPUT.													
5V OUTPUT													
2.00	2.00	2.00	1.50	—	4.75-5.25	83	41	40	38	32	31	LVS-42-5B	
3.00	3.00	3.00	2.25	—	4.75-5.25	83	50	49	46	39	38	LVS-43-5B	
5.00	5.00	5.00	3.75	—	4.75-5.25	83	75	72	69	51	48	LVS-44-5B	
10.00	10.00	10.00	7.50	—	4.75-5.25	83	109	103	98	83	69	LVS-45-5B	
12V OUTPUT													
0.90	0.90	0.90	0.67	—	11.40-12.60	83	41	40	38	32	31	LVS-42-12B	
1.30	1.30	1.30	0.97	—	11.40-12.60	83	50	49	46	39	38	LVS-43-12B	
2.10	2.10	2.10	1.57	—	11.40-12.60	83	75	72	69	51	48	LVS-44-12B	
4.20	4.20	4.20	3.15	—	11.40-12.60	83	108	103	98	83	69	LVS-45-12B	
15V OUTPUT													
0.70	0.70	0.70	0.52	—	14.25-15.75	83	41	40	38	32	31	LVS-42-15B	
1.00	1.00	1.00	0.75	—	14.25-15.75	83	50	49	46	39	38	LVS-43-15	
15V output models continued on page 65.													

15V output models continued on page 65.

*Rating for VS150 is at 35°C.

Commercial Ratings Table – Single Output

K SERIES

- PCB Mount
- Small Footprint
- High Density

V SERIES

- Lowest Cost 110VAC Input
- PCB and Chassis Mount
- Meets FCC Curve B on Duals and Triples

Z SERIES

- Lowest Cost 110/220VAC Input
- PCB Construction
- Meets FCC and VDE Curve B

LV SERIES

- Chassis Mount
- 110/220VAC Input
- Molex Connections

LS SERIES

- 110VAC Input
- Chassis Mount
- High Density

MAX CURRENT (AMPS) AT AMBIENT TEMPERATURE OF					Vout ADJ. RANGE	COMPLETE ELEC. SPEC. PG.	UNIT PRICE PER DELIVERED QUANTITY					MODEL
25°C	40°C	50°C	60°C	71°C			1	10	25	100	250	

SINGLE OUTPUT. 110VAC INPUT.

15V OUTPUT (CONT'D.)

1.70	1.70	1.70	1.27	—	14.25-15.75	83	75	72	69	51	48	LVS-44-15B
3.40	3.40	3.40	2.55	—	14.25-15.75	83	109	103	98	83	69	LVS-45-15B

24V OUTPUT

0.50	0.50	0.50	0.37	—	22.80-25.20	83	41	40	38	32	31	LVS-42-24B
0.70	0.70	0.70	0.52	—	22.80-25.20	83	50	49	46	39	38	LVS-43-24B
1.10	1.10	1.10	0.82	—	22.80-25.20	83	75	72	69	51	48	LVS-44-24B
2.10	2.10	2.10	1.57	—	22.80-25.20	72	109	103	98	83	69	LVS-45-24B

28V OUTPUT

1.80	1.80	1.80	1.35	—	26.60-29.40	83	109	103	98	83	69	LVS-45-28B
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48V OUTPUT

0.20	0.20	0.20	0.15	—	45.60-50.40	83	41	40	38	32	31	LVS-42-48B
0.30	0.30	0.30	0.22	—	45.60-50.40	83	50	49	46	39	38	LVS-43-48B
0.50	0.50	0.50	0.37	—	45.60-50.40	83	75	72	69	51	48	LVS-44-48B
1.00	1.00	1.00	0.75	—	45.60-50.40	83	109	103	98	83	69	LVS-45-48B

*Rating for VS150 is at 35°C.

Commercial Ratings Table – Single Output

K SERIES

- PCB Mount
- Small Footprint
- High Density

V SERIES

- Lowest Cost 110VAC Input
- PCB and Chassis Mount
- Meets FCC Curve B on Duals and Triples

Z SERIES

- Lowest Cost 110/220VAC Input
- PCB Construction
- Meets FCC and VDE Curve B

LV SERIES

- Chassis Mount
- 110/220VAC Input
- Molex Connections

LS SERIES

- 110VAC Input
- Chassis Mount
- High Density

MAX CURRENT (AMPS) AT AMBIENT TEMPERATURE OF				V _{out} ADJ. RANGE	COMPLETE ELEC. SPEC. PG.	UNIT PRICE PER DELIVERED QUANTITY					MODEL
25°C	40°C	50°C	60°C			1	10	25	100	250	

SINGLE OUTPUT. 110/220VAC.

5V OUTPUT

2.00	2.00	2.00	1.50	4.75-5.25	87	59	57	54	46	41	LVS-42E-5
2.00	2.00	2.00	2.25	4.75-5.25	87	68	66	63	57	48	LVS-43E-5
5.00	5.00	5.00	3.75	4.75-5.25	87	105	101	97	84	76	LVS-44E-5
10.00	10.00	10.00	7.50	4.75-5.25	87	141	136	130	115	102	LVS-45E-5

12V OUTPUT

0.90	0.90	0.90	0.67	11.40-12.60	87	59	57	54	46	41	LVS-42E-12
1.30	1.30	1.30	0.97	11.40-12.60	87	68	66	63	57	48	LVS-43E-12
2.10	2.10	2.10	1.57	11.40-12.60	87	105	101	97	84	76	LVS-44E-12
4.20	4.20	4.20	3.15	11.40-12.60	87	141	136	130	115	102	LVS-45E-12

15V OUTPUT

0.70	0.70	0.70	0.25	14.25-15.75	83	59	57	54	46	41	LVS-42E-15
1.00	1.00	1.00	0.75	14.25-15.75	87	68	66	63	57	48	LVS-43E-15
1.70	1.70	1.53	1.27	14.25-15.75	87	105	101	97	84	76	LVS-44E-15
3.40	3.40	3.40	2.55	14.25-15.75	87	141	136	130	115	102	LVS-45E-15

24V OUTPUT

0.50	0.50	0.50	0.37	22.80-25.20	87	59	57	54	46	41	LVS-42E-24
0.70	0.70	0.70	0.52	22.80-25.20	87	68	66	63	57	48	LVS-43E-24
1.10	1.10	1.10	0.82	22.80-25.20	87	105	101	97	84	76	LVS-44E-24
2.10	2.10	2.10	1.57	22.80-25.20	87	141	136	130	115	102	LVS-45E-24

*Rating for VS150 is at 35°C.

Commercial Ratings Table—Single and Dual Output

K SERIES

- PCB Mount
- Small Footprint
- High Density

V SERIES

- Lowest Cost 110VAC Input
- PCB and Chassis Mount
- Meets FCC Curve B on Duals and Triples

Z SERIES

- Lowest Cost 110/220VAC Input
- PCB Construction
- Meets FCC and VDE Curve B

LV SERIES

- Chassis Mount
- 110/220VAC Input
- Molex Connections

LS SERIES

- 110VAC Input
- Chassis Mount
- High Density

MAX CURRENT (AMPS) AT AMBIENT TEMPERATURE OF				Vout ADJ. RANGE	COMPLETE ELEC. SPEC. PG.	UNIT PRICE PER DELIVERED QUANTITY					MODEL
25°C	40°C	50°C	60°C			1	10	25	100	250	
SINGLE OUTPUT. 110/220VAC.											
28V OUTPUT											
0.40	0.40	0.40	0.30	26.60-29.40	87	\$ 59	\$ 57	\$ 54	\$ 46	\$ 41	LVS-42E-28
48V OUTPUT											
1.00	1.00	1.00	0.75	45.60-50.40	87	141	136	130	115	102	LVS-45E-48

*Rating for ZS150 is at 35°C.

Commercial Ratings Table – Triple Output

K SERIES

- PCB Mount
- Small Footprint
- High Density

V SERIES

- Lowest Cost 110VAC Input
- PCB and Chassis Mount
- Meets FCC Curve B on Duals and Triples

Z SERIES

- Lowest Cost 110/220VAC Input
- PCB Construction
- Meets FCC and VDE Curve B

LV SERIES

- Chassis Mount
- 110/220VAC Input
- Molex Connections

LS SERIES

- 110VAC Input
- Chassis Mount
- High Density

Vout	MAX CURRENT (AMPS) AT AMBIENT TEMPERATURE OF			MAX POWER (WATTS) AT AMBIENT TEMPERATURE OF			Vout ADJ. RANGE	COMPLETE ELEC. SPEC. PG.	1	UNIT PRICE PER DELIVERED QUANTITY				MODEL
	40°C	50°C	60°C	40°C	50°C	60°C				10	25	100	250	
TRIPLE OUTPUT. 110VAC INPUT.														
5V, + 12V, - 12V OUTPUT														
5	2.00	2.00	1.00	16.00	16.00	8.00	4.95-5.05	83	\$ 90	\$ 87	\$ 82	\$ 66	\$ 53	LVT-40-133B
+12	0.30	0.30	0.15				±5% Fixed							
-12	0.20	0.20	0.10				±5% Fixed							
5	3.00	1.50	—	33.00	16.50	—	4.95-5.05	83	132	127	120	95	77	LVT-41-133B
+12	1.20	0.60	—				±5% Fixed							
-12	0.30	0.15	—				±5% Fixed							
5V, + 15V, - 15V OUTPUT														
5	2.00	2.00	1.00	17.50	17.50	8.75	4.95-5.05	83	90	87	82	66	53	LVT-40-144B
+15	0.30	0.30	0.15				±5% Fixed							
-15	0.20	0.20	0.10				±5% Fixed							
5	3.00	1.50	—	37.50	18.75	—	4.95-5.05	83	132	127	120	95	77	LVT-41-144B
+15	1.20	0.60	—				±5% Fixed							
-15	0.30	0.15	—				±5% Fixed							

Commercial Ratings Table – Triple Output

K SERIES

- PCB Mount
- Small Footprint
- High Density

V SERIES

- Lowest Cost 110VAC Input
- PCB and Chassis Mount
- Meets FCC Curve B on Duals and Triples

Z SERIES

- Lowest Cost 110/220VAC Input
- PCB Construction
- Meets FCC and VDE Curve B

LV SERIES

- Chassis Mount
- 110/220VAC Input
- Molex Connections

LS SERIES

- 110VAC Input
- Chassis Mount
- High Density

Vout	MAX CURRENT (AMPS) AT AMBIENT TEMPERATURE OF			MAX POWER (WATTS) AT AMBIENT TEMPERATURE OF			Vout ADJ. RANGE	COMPLETE ELEC. SPEC. PG.	1	UNIT PRICE PER DELIVERED QUANTITY				MODEL
	40°C	50°C	60°C	40°C	50°C	60°C				10	25	100	250	
TRIPLE OUTPUT. 110/220 VAC INPUT.														
5V, +12V, -12V OUTPUT														
5	1.00	1.00	0.70	7.40	7.40	5.18	±1% Fixed	83	\$ 74	\$ 70	\$ 67	\$ 60	\$ 47	LVT-38E-133
+12	0.10	0.10	0.07				±5% Fixed							
-12	0.10	0.10	0.07				±5% Fixed							
5	2.00	1.80	1.20	16.00	14.40	9.60	4.95-5.05	83	96	91	85	69	64	LVT-40E-133
+12	0.30	0.27	0.18				±5% Fixed							
-12	0.20	0.18	0.12				±5% Fixed							
5	2.00	2.00	1.40	16.00	16.00	11.20	±1% Fixed	83	104	100	96	76	62	LVT-39E-133
+12	0.30	0.30	0.21				±5% Fixed							
-12	0.20	0.20	0.14				±5% Fixed							
5	3.00	3.00	2.10	24.60	24.60	17.22	±1% Fixed	83	153	147	141	108	83	LVT-42E-133
+12	0.40	0.40	0.28				±5% Fixed							
-12	0.40	0.40	0.28				±5% Fixed							
5	3.00	2.00	1.30	33.00	22.00	14.06	4.95-5.05	83	140	134	129	102	81	LVT-41E-133
+12	1.20	0.80	0.50				±5% Fixed							
-12	0.30	0.20	0.13				±5% Fixed							
5V, +15V, -15V OUTPUT														
5	1.00	1.00	0.70	8.00	8.00	5.60	±1% Fixed	83	74	70	67	60	47	LVT-38E-144
+15	0.10	0.10	0.07				±5% Fixed							
-15	0.10	0.10	0.07				±5% Fixed							
5	2.00	1.80	1.20	17.50	15.75	10.50	4.95-5.05	83	96	91	85	69	64	LVT-40E-144
+15	0.30	0.27	0.18				±5% Fixed							
-15	0.20	0.18	0.12				±5% Fixed							
5	2.00	2.00	1.40	17.50	17.50	12.25	±1% Fixed	83	104	100	96	76	62	LVT-39E-144
+15	0.30	0.30	0.21				±5% Fixed							
-15	0.20	0.20	0.14				±5% Fixed							
5	3.00	3.00	2.10	27.00	27.00	18.90	±1% Fixed	83	153	147	141	108	83	LVT-42E-144
+15	0.40	0.40	0.28				±5% Fixed							
-15	0.40	0.40	0.28				±5% Fixed							
5	3.00	2.00	1.30	37.50	25.00	15.95	4.95-5.05	83	140	134	129	102	81	LVT-41E-144
+15	1.20	0.80	0.50				±5% Fixed							
-15	0.30	0.20	0.13				±5% Fixed							

*Ratings for ZT170 Series apply when operated with forced air cooling. Consult factory for applicable ratings without forced air cooling.

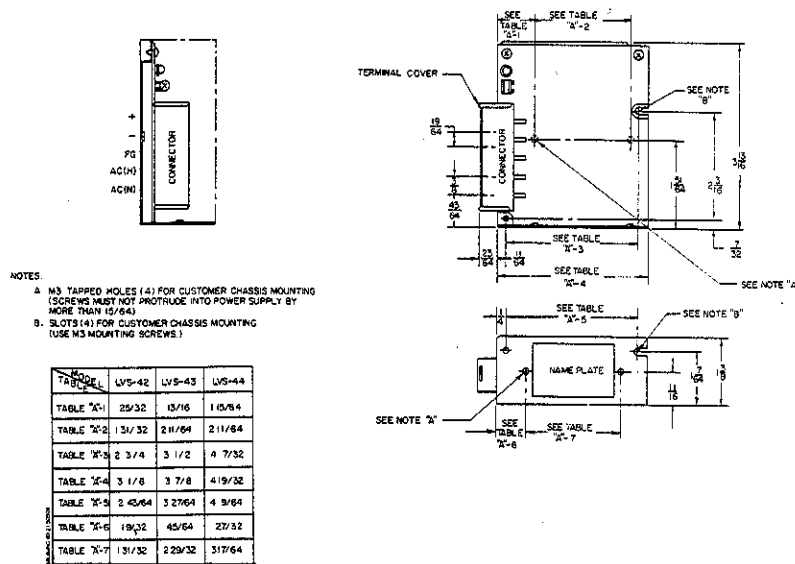
LAMBDA ELECTRONICS INC. 

515 Broad Hollow Rd., Melville, NY 11747-3700 • 1-800-LAMBDA-4

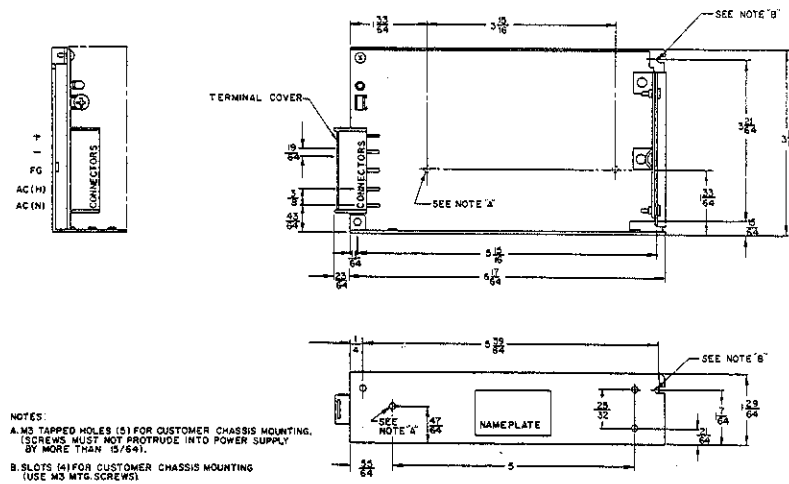
Part III – Test, Systems and Laboratory Power Supplies

LV AND LV-E SERIES MECHANICAL DRAWINGS

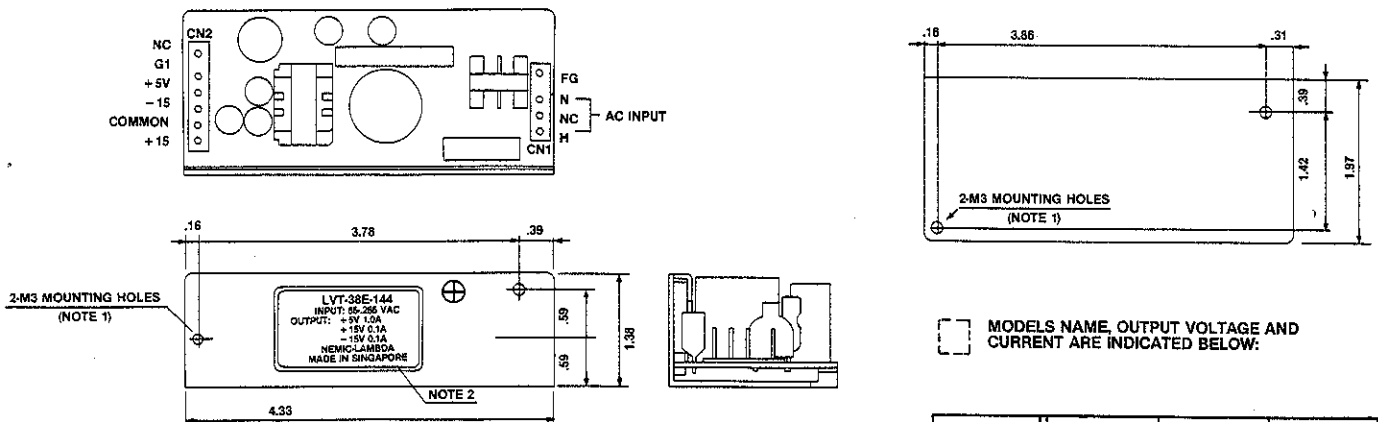
LVS-42, 42E
LVS-43, 43E
LVS-44, 44E



LVS-45, 45E

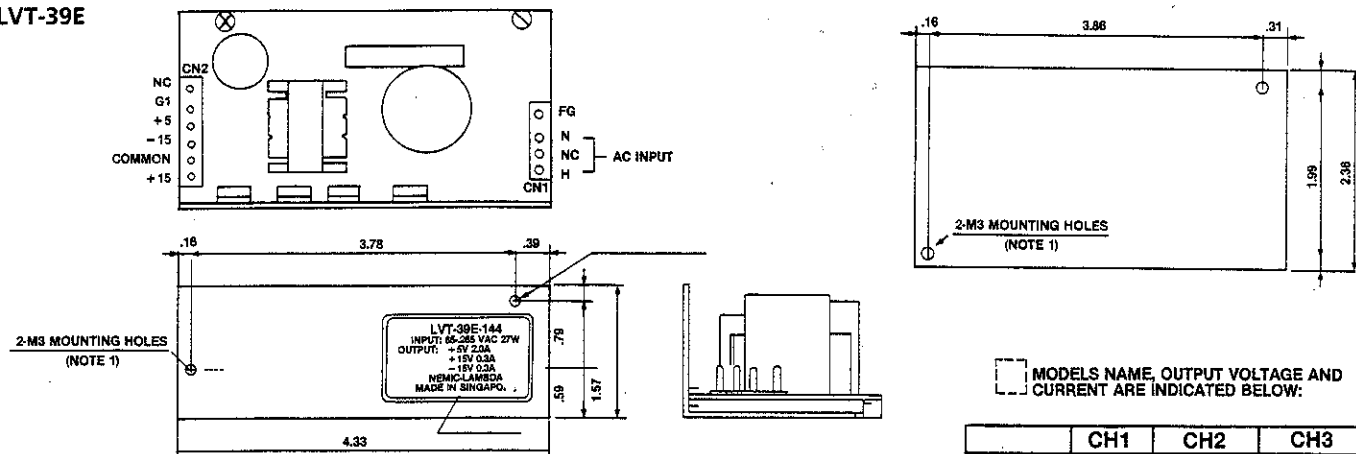


LVT-38E



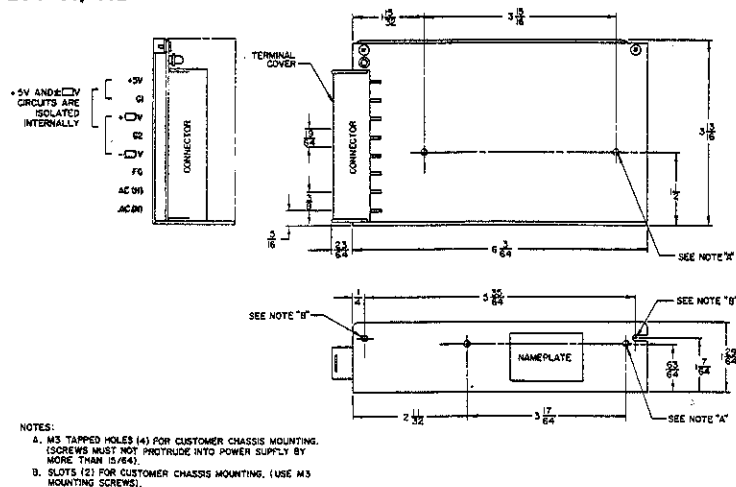
LV AND LV-E SERIES MECHANICAL DRAWINGS

LVT-39E



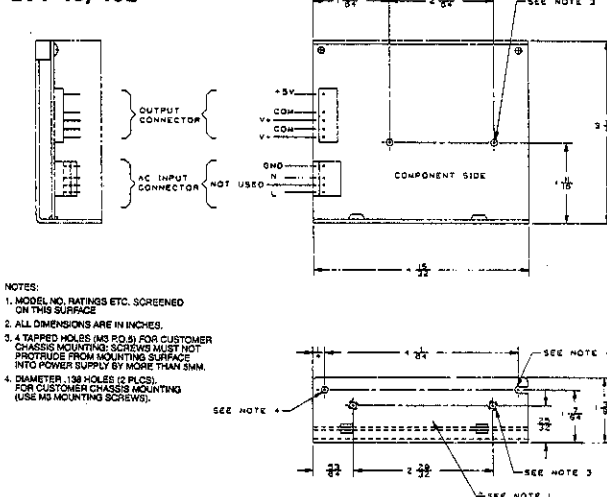
- Note 1. Mounting screws must not protrude into power supply by more than 4mm.
2. Country of manufacture will be shown here.

LVT-41, 41E



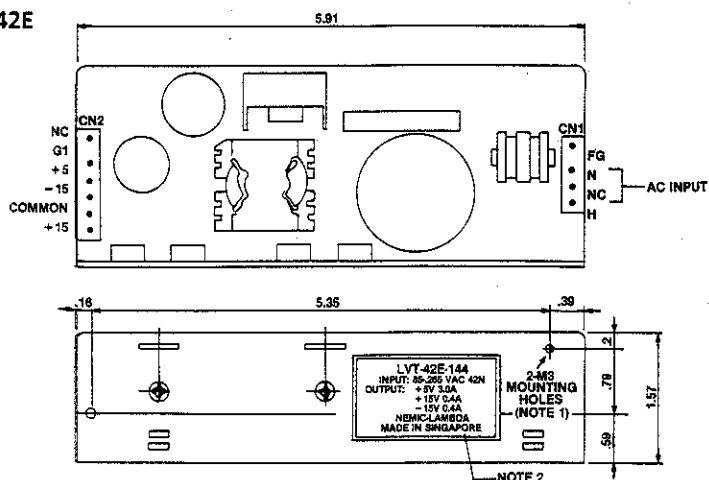
- NOTES:
- M3 TAPPED HOLES (4) FOR CUSTOMER CHASSIS MOUNTING. (SCREWS MUST NOT PROTRUDE INTO POWER SUPPLY BY MORE THAN 15/64").
 - SLOTS (2) FOR CUSTOMER CHASSIS MOUNTING. (USE M3 MOUNTING SCREWS).

LVT-40, 40E



- NOTES:
- MODEL NO., RATINGS ETC. SCREENED ON THIS SURFACE.
 - ALL DIMENSIONS ARE IN INCHES.
 - 4 TAPPED HOLES (M3 P.O.S.) FOR CUSTOMER CHASSIS MOUNTING. SCREWS MUST NOT PROTRUDE FROM MOUNTING SURFACE INTO POWER SUPPLY BY MORE THAN 3MM.
 - DIMETER .138 HOLES (2 P.O.S.) FOR CUSTOMER CHASSIS MOUNTING (USE M3 MOUNTING SCREWS).

LVT-42E



- Note 1. Mounting screws must not protrude more than 4mm into the power supply.
2. Country of manufacture will be shown here.

MODEL NAME, OUTPUT VOLTAGE AND CURRENT ARE INDICATED BELOW:

	CH1	CH2	CH3
LVT-42E-144	+5V3A	+15V0.4A	-15V0.4A
LVT-42E-133	+5V3A	+12V0.4A	-12V0.4A