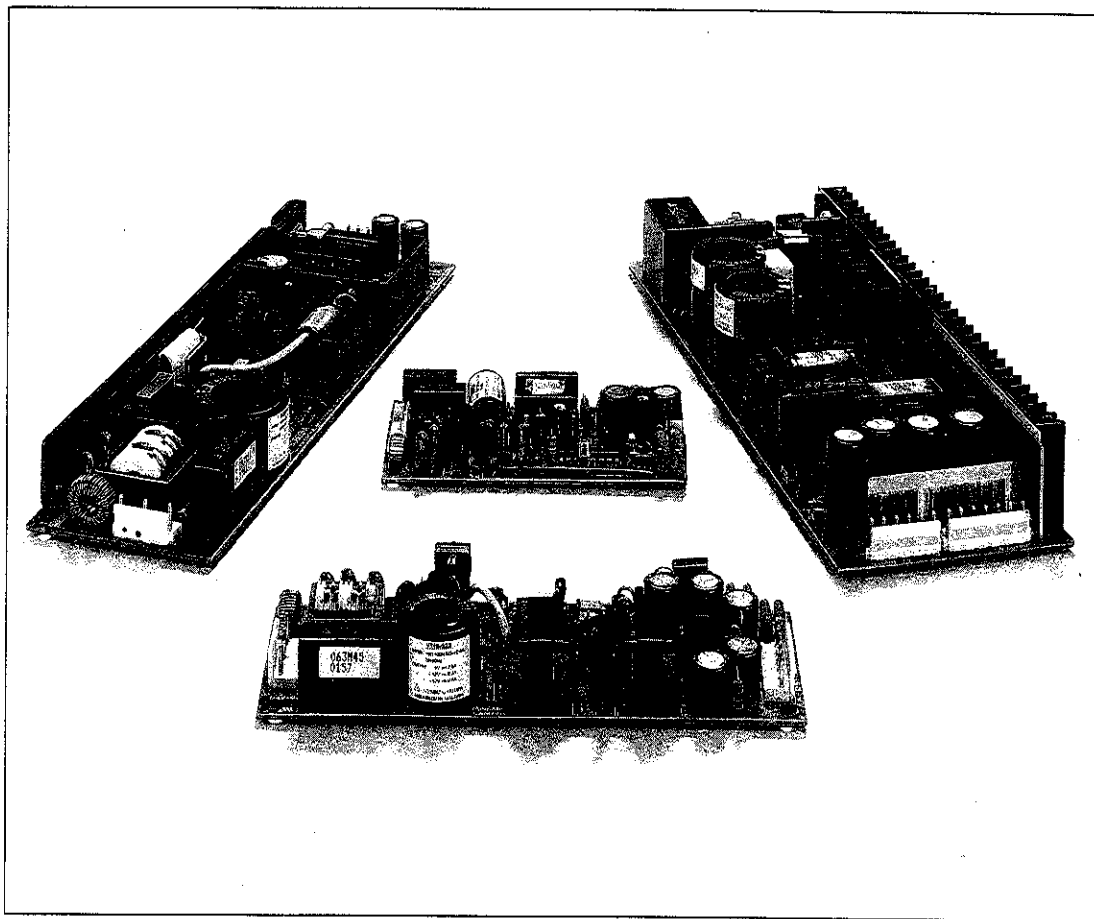


Part I – AC-to-DC Power Supplies

LAMBDA'S V AND Z SERIES



Ideal For High Volume, Low Cost Office Automation Applications

The requirements for reliability and cost effectiveness are no longer mutually exclusive in office automation, point of sale equipment and other high volume applications.

Lambda's V and Z Series provide high quality, reliable power at prices starting at \$21.

From 10W to 170W, the V & Z Series is available in single, dual and triple output packages. They are designed with open frame PC board construction and operate from 85-132VAC (V Series) for North America and the Pacific Rim or 85-132/170-250VAC (Z Series) for worldwide applications. All models are designed for worldwide safety applications and are currently under evaluation for UL/CSA/TUV/Dentori. Input EMI on many models conforms to FCC Curve B Limits.

All Lambda V and Z Series models are in stock for immediate delivery. Evaluation samples are available.

V & SERIES FEATURES

Single, Dual, and Triple Outputs	From 10W to 200W, 120 different off the shelf modules ensures a standard solution for almost any application.		
Meets Worldwide EMI Requirements	Conducted EMI to VDE 0871 Curve B and FCC Class B ensures reliable system performance.		
Ease of Manufacturing and Service	Molex type input and output connections ensure easy manufacturing and service. Mating plugs and terminals are provided.		
Meets Worldwide Safety Requirements	Safety Agency Approvals to UL1950 and CSA 1402C designed for deliverable equipment.		
Output Current Surge Capability	Dual output models are capable of providing short term output current surges, ideal for motor start applications.		
Convection Cooled	Eliminates the need for forced air cooling and/or heatsinks.		
Auxiliary Monitoring Signal	The VD20 is designed with an auxiliary monitoring signal to provide output status indication.		
Isolation	Minimum Isolation (VAC)	Series	
		V	Z
	Input/output	2000	3750
	Input/ground	2000	2500
	Output/ground	500	500
90 Day Guarantee	Lambda's 90 day guarantee includes labor as well as parts.		
One Day Delivery	Lambda's V & Z Series power supplies are in stock for one day delivery.		

Part I – AC-to-DC Power Supplies

V SERIES SPECIFICATIONS

AC Input

line85 to 132 VAC (47-440 Hz).

Efficiency

Model	Efficiency (Typical)
VT15	63%
VD20	70%
VT30, 60, VS15	71%
VS10-5, -12	72%
VS10-15, -24	73%
VS30-5	75%
VS30-12, VD75	77%
VS30-15, VS50-5, VS150-5	78%
VS30-24, VS50-12, VS75-5	79%
VS100-5, VS150-12	
VS30-48, VS50-15, 24, 48	80%
VS75-12, 15, VS100-12, 15, VS150-15, 24	
VS75-48, VS100-24, 48, VS150-48	81%

DC Input

line110-175 VDC.

EMI

Conducted EMI on the input of the VD and VT Series conforms to FCC Docket 20780 Class B VICCI-II. Class A and VICCI-I on the VS Series.

DC Output

Output range shown in tables.

Regulated Voltage

regulation, line	0.4% maximum on main 5V output of VT Series and VS Series. 0.4% on CH2 of VT15. 1% on all other auxiliary outputs of VT Series. 5% on VD Series.
regulation, load	0.625% on 48V models of VS Series. 0.8% on all other VS Series units; CH1 of VT Series; CH2 of VT30, 60. 0.1% on all other outputs of VT Series. 5% on VD Series.
ripple and noise (pk-pk)	120mV on 5V outputs of the VS Series, VD20 and VT Series. 150mV on 12V and 15V outputs of the VS and VT Series. 160mV on 8V outputs of VD75. 200mV on 24V outputs of the VS Series and 12V outputs of VD20. 480mV on 48V outputs of the VS Series and 24V outputs of VD75.

Pre-Load Requirements

All VT units require a 10% preload on CH1 for operation within published specifications.

Overload Protection

Automatic current limiting is provided on all sets. Avoid operation in an overcurrent or short circuit condition for greater than 30 seconds.

Overvoltage Protection

Overvoltage protection is provided on all VS models, the VD75, and CH1, of the VT Series. Automatic shutdown mechanism requires recycling of input for reset. Zener diode clamping mechanism only on VS10.

In-Rush Current Limiting

The typical turn-on in-rush current is 30A for the VS10, 30, 50 and 75; VD75; and the VT Series. 20A on the VS100, 150 and the VD20.

Cooling

All units are convection cooled and require no fans or blowers.

Isolation Rating

2000VAC input to output and input to ground. 500VAC output to ground.

Operating Temperature Range

0° to +50°C for VD20; -10°C to +60°C for PCB models; -10°C to +50°C for /S2 models.

Storage Temperature

-30°C to +85°C.

Connections

All input and output connections are via Molex type connectors.

Mounting

Ratings are for horizontal mounting component side up. For other mounting configurations, consult factory for rating information.

Construction

Some VS models are available as PCB construction or with chassis and covers. The units with chassis and cover are denoted by suffix "-S2". Units without -S2 suffix are PCB construction.

Physical Data

Package Model	Weight		Construction	Size Inches
	Lbs. Net	Lbs. Ship		
VS10	.17	.50	PCB	1.93 × .67 × 3.70
VS10-S2	.37	.70	Enclosed	2.20 × .98 × 4.90
VS15	.22	.60	PCB	1.97 × .67 × 4.53
VS15-S2	.44	.80	Enclosed	2.20 × .98 × 5.73
VS30	.29	.60	PCB	1.97 × .98 × 5.22
VS30-S2	.64	.95	Enclosed	2.22 × 1.30 × 6.42
VS50	.44	.80	PCB	1.97 × .98 × 7.68
VS50-S2	.90	1.30	Enclosed	2.22 × 1.30 × 8.86
VS75	.77	1.00	PCB	1.97 × 1.26 × 8.74
VS100	.92	1.30	PCB	2.44 × 1.26 × 8.74
VS150	1.21	1.50	PCB	2.95 × 1.42 × 8.74
VD20	.55	.90	PCB	1.75 × 1.1 × 4.34
VD75	.77	1.00	PCB	3.11 × 1.57 × 6.89
VT15	.33	.70	PCB	2.17 × .98 × 5.70
VT30	.46	.80	PCB	2.17 × .98 × 7.01
VT60	.62	.95	PCB	2.36 × .98 × 8.66

UL/CSA/TUV

Most models have received agency approval or have passed all tests and are waiting for formal notification. Contact the factory for the status of specific models.

Guarantee

90 day guarantee includes parts as well as labor.

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.												
5V OUTPUT												
2.00	2.00	1.40	—	—	4.50-5.50	72	36	32	30	27	25	VS10-5/S2
2.00	2.00	2.00	1.40	—	4.50-5.50	72	29	27	25	23	22	VS10-5
3.00	3.00	2.10	—	—	4.50-5.50	72	41	39	37	30	27	VS15-5/S2
3.00	3.00	3.00	2.10	—	4.50-5.50	72	35	33	31	26	24	VS15-5
6.00	6.00	4.80	—	—	4.50-5.50	72	51	48	44	36	32	VS30-5/S2
6.00	6.00	6.00	4.20	—	4.50-5.50	72	44	42	39	31	29	VS30-5
10.00	8.00	7.00	—	—	4.50-5.50	72	63	58	54	43	40	VS50-5/S2
10.00	10.00	10.00	7.00	—	4.50-5.50	72	56	53	49	39	37	VS50-5
15.00	15.00	15.00	10.50	—	4.50-5.50	72	71	68	63	50	45	VS75-5
20.00	20.00	20.00	14.00	—	4.50-5.50	72	87	83	77	62	57	VS100-5
30.00	27.00*	24.00	21.00	—	4.50-5.50	72	121	116	107	85	79	VS150-5
12V OUTPUT												
0.85	0.85	0.60	—	—	10.80-13.20	72	36	32	30	27	25	VS10-12/S2
0.85	0.85	0.85	0.60	—	10.80-13.20	72	29	27	25	23	22	VS10-12
1.25	1.25	0.88	—	—	10.80-13.20	72	41	39	37	30	27	VS15-12/S2
1.25	1.25	1.25	0.88	—	10.80-13.20	72	35	33	31	26	24	VS15-12
2.50	2.50	2.00	—	—	10.80-13.20	72	51	48	44	36	32	VS30-12/S2
2.50	2.50	2.50	1.75	—	10.80-13.20	72	44	42	39	31	29	VS30-12
4.30	3.44	3.01	—	—	10.80-13.20	72	63	58	54	43	40	VS50-12/S2
4.30	4.30	4.30	3.01	—	10.80-13.20	72	56	53	49	39	37	VS50-12
6.30	6.30	6.30	4.41	—	10.80-13.20	72	66	63	58	46	42	VS75-12
8.50	8.50	8.50	5.95	—	10.80-13.20	72	87	83	77	62	57	VS100-12
12.50	11.25*	10.00	8.75	—	10.80-13.20	72	121	116	107	85	79	VS150-12
15V OUTPUT												
0.70	0.70	0.49	—	—	13.50-16.50	72	36	32	30	27	25	VS10-15/S2
0.70	0.70	0.70	0.49	—	13.50-16.50	72	29	27	25	23	22	VS10-15
1.00	1.00	0.70	—	—	13.50-16.50	72	41	39	37	30	27	VS15-15/S2
1.00	1.00	1.00	0.70	—	13.50-16.50	72	35	33	31	26	24	VS15-15

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.)

2.00	2.00	1.60	—	—	13.50-16.50	72	51	48	44	36	32	VS30-15/S2
2.00	2.00	2.00	1.40	—	13.50-16.50	72	44	42	39	31	29	VS30-15
3.50	2.80	2.45	—	—	13.50-16.50	72	63	58	54	43	40	VS50-15/S2
3.50	3.50	3.50	2.45	—	13.50-16.50	72	56	53	49	39	37	VS50-15
5.00	5.00	5.00	3.50	—	13.50-16.50	72	71	68	63	50	45	VS75-15
7.00	7.00	7.00	4.90	—	13.50-16.50	72	87	83	77	62	57	VS100-15
10.00	9.00*	8.00	7.00	—	13.50-16.50	72	121	116	107	85	79	VS150-15

24V OUTPUT

0.45	0.45	0.32	—	—	21.60-26.40	72	36	32	30	27	25	VS10-24/S2
0.45	0.45	0.45	0.32	—	21.60-26.40	72	29	27	25	23	22	VS10-24
0.65	0.65	0.46	—	—	21.60-26.40	72	41	39	37	30	27	VS15-24/S2
0.65	0.65	0.65	0.46	—	21.60-26.40	72	35	33	31	26	24	VS15-24
1.10	1.10	1.10	0.82	—	21.60-26.40	72	51	48	44	36	32	VS30-24/S2
1.30	1.30	1.04	—	—	21.60-26.40	72	44	42	39	31	29	VS30-24
1.30	1.30	1.30	0.91	—	21.60-26.40	72	44	42	39	31	29	VS30-24
2.10	1.68	1.47	—	—	21.60-26.40	72	63	58	54	43	40	VS50-24/S2
2.50	2.50	2.20	1.55	—	21.60-26.40	83	56	53	49	39	37	VS50-24
3.20	3.20	3.20	2.24	—	21.60-26.40	83	71	68	63	50	45	VS75-24
4.30	4.30	4.30	3.01	—	21.60-26.40	83	87	83	77	62	57	VS100-24
6.30	5.67*	5.04	4.41	—	21.60-26.40	72	121	116	107	85	79	VS150-24

28V OUTPUT

48V OUTPUT

0.70	0.70	0.56	—	—	43.20-52.80	72	51	48	44	36	32	VS30-48/S2
0.70	0.70	0.70	0.49	—	43.20-52.80	72	44	42	39	31	29	VS30-48
1.10	0.88	0.77	—	—	43.20-52.80	72	63	58	54	43	40	VS50-48/S2
1.30	1.30	1.14	0.81	—	43.20-52.80	72	56	53	49	39	37	VS50-48
1.60	1.60	1.60	1.12	—	43.20-52.80	72	71	68	63	50	45	VS75-48
2.20	2.20	2.20	1.54	—	43.20-52.80	72	87	83	77	62	57	VS100-48
3.20	2.88*	2.56	2.24	—	43.20-52.80	72	121	116	107	85	79	VS150-48

*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	

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

DUAL OUTPUT. 110VAC INPUT.

5V, 12V OUTPUT

5V	1.00	1.00	—	17.00	17.00	—	±5% Fixed ±6% Fixed	72	\$ 51	\$ 49	\$ 45	\$ 37	\$ 33	VD20-0512
12V	1.00	1.00	—											

8V, 24V OUTPUT

8V	2.00	1.40	0.80	75.00	52.50	30.00	7.60-8.40 ±5% Fixed	72	73	70	66	53	49	VD75-0824
24V	2.00	1.40	0.80											

*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	1.40	16.00	16.00	11.20	5.00-5.25 ±5% Fixed	72	49	43	41	32	30	VT15-522
+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	33.00	33.00	23.10	5.00-5.25 ±5% Fixed	72	60	57	53	42	39	VT30-522
+12	1.20	1.20	0.84				±5% Fixed							
-12	0.30	0.30	0.21				±5% Fixed							
5	5.00	5.00	3.50	55.00	55.00	38.50	5.00-5.25 ±5% Fixed	72	76	72	67	54	50	VT60-522
+12	2.00	2.00	1.40				±5% Fixed							
-12	0.50	0.50	0.35				±5% Fixed							

5V, +15V, -15V OUTPUT

5	2.00	2.00	1.40	17.50	17.50	12.25	5.00-5.25 ±5% Fixed	72	49	43	41	32	30	VT15-5FF
+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	34.50	34.50	24.15	5.00-5.25 ±5% Fixed	72	60	57	53	42	39	VT30-5FF
+15	1.00	1.00	0.70				±5% Fixed							
-15	0.30	0.30	0.21				±5% Fixed							
5	5.00	5.00	3.50	56.50	56.50	39.55	5.00-5.25 ±5% Fixed	72	76	72	67	54	50	VT60-5FF
+15	1.60	1.60	1.12				±5% Fixed							
-15	0.50	0.50	0.35				±5% Fixed							

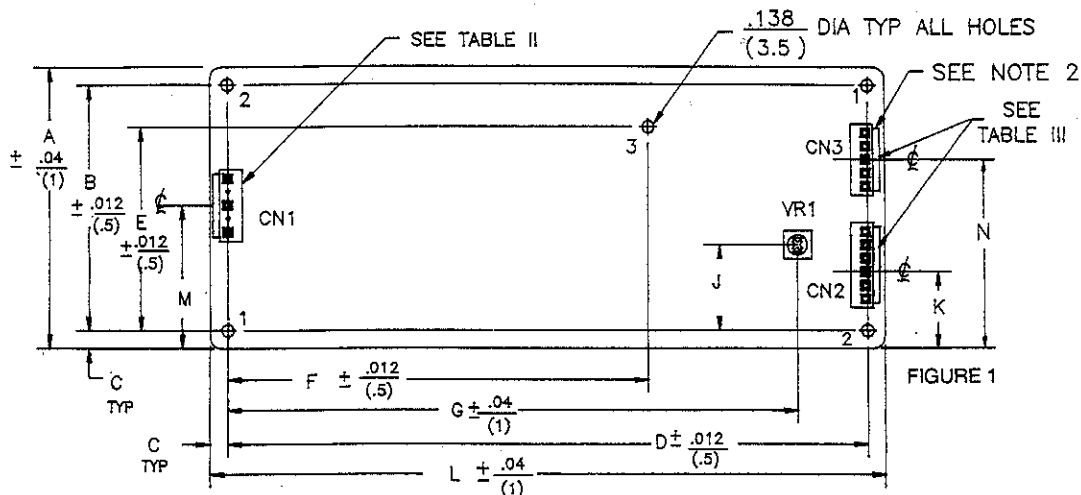
5V, +12V, -5V OUTPUT

5	2.00	2.00	1.40	14.60	14.60	10.22	5.00-5.25 ±5% Fixed	72	49	43	41	32	30	VT15-525
+12	0.30	0.30	0.21				±5% Fixed							
-5	0.20	0.20	0.14				±5% Fixed							
5	3.00	3.00	2.10	30.90	30.90	21.63	5.00-5.25 ±5% Fixed	72	60	57	53	42	39	VT30-525
+12	1.20	1.20	0.84				±5% Fixed							
-5	0.30	0.30	0.21				±5% Fixed							
5	5.00	5.00	3.50	51.50	51.50	36.05	5.00-5.25 ±5% Fixed	72	76	72	67	54	50	VT60-525
+12	2.00	2.00	1.40				±5% Fixed							
-5	0.50	0.50	0.35				±5% Fixed							

Part I – AC-to-DC Power Supplies

V AND SERIES MECHANICAL DRAWINGS

V SERIES



NOTES:

- VS10 MODEL HAS TWO MOUNTING HOLES (MARKED 1 IN ABOVE DRAWING); ALL OTHER V AND Z MODELS HAVE FOUR OR FIVE MOUNTING HOLES. SEE TABLE I DIMENSIONS E AND F WHICH REFER TO FIFTH HOLE (MARKED 3 ABOVE).
- SEE TABLE I FOR DIMENSIONS. DIMENSIONS ARE GIVEN IN INCHES OVER MILLIMETERS.

END VIEW



TABLE II

MODEL	VS-10 VS-15	VS-30 VS-50 VS-75 VS-100 VS-150	VD-20 VD-75 VD-75 (GROUND LUG IS LOCATED AT Z MOUNTING HOLE)	ZS-10 ZS-15	ZS-30 ZS-50 ZS-75 ZS-100 ZS-150 ZD-30	ZD-50 ZD-120 ZT-30 ZT-60 ZT-90 ZT-120
FIGURE	1 4 7 CN1	5 3 1 CN1	3 1 CN1	1 5 8 CN1	1 4 6 CN1	1 4 6 CN1

TABLE III

VS-10	VS-15	VS-30 VS-50	VS-75	VS-100	VS-150	VD-20	VD-75	VT-15 VT-30	VT-60

ZS-10	ZS-15 ZS-30 ZS-50	ZS-75	ZS-100	ZS-150	ZD-30, ZD-50	ZD-75	ZD-120

ZT-30	ZT-60 ZT-90	ZT-170

V AND SERIES MECHANICAL DRAWINGS

TABLE I DIMENSIONS ARE IN $\frac{\text{INCHES}}{(\text{MM})}$

SEE FIGURE 1

	MODEL	DIM	A	B	C	D	E	F	G	H	J	K	L	M	N
VS-SERIES	VS10		$\frac{1.93}{(49)}$	$\frac{1.654}{(42)}$	$\frac{.138}{(3.5)}$	$\frac{3.425}{(87)}$			$\frac{.51}{(13)}$	$\frac{.67}{(17)}$	$\frac{.28}{(7.0)}$	$\frac{.85}{(21.5)}$	$\frac{3.70}{(94)}$	$\frac{1.02}{(26)}$	
	VS15		$\frac{1.97}{(50)}$	$\frac{1.693}{(43)}$	$\frac{.138}{(3.5)}$	$\frac{4.252}{(108)}$			$\frac{.55}{(14)}$	$\frac{.67}{(17)}$	$\frac{.37}{(9.5)}$	$\frac{1.39}{(35.25)}$	$\frac{4.53}{(115)}$	$\frac{1.22}{(31)}$	
	VS30		$\frac{1.97}{(50)}$	$\frac{1.576}{(40)}$	$\frac{.197}{(5)}$	$\frac{4.823}{(122.5)}$			$\frac{.55}{(14)}$	$\frac{.98}{(25)}$	$\frac{.85}{(21.5)}$	$\frac{1.18}{(30)}$	$\frac{5.22}{(132.5)}$	$\frac{1.02}{(26)}$	
	VS50		$\frac{1.97}{(50)}$	$\frac{1.576}{(40)}$	$\frac{.197}{(5)}$	$\frac{7.283}{(185)}$	$\frac{1.102}{(28)}$	$\frac{4.843}{(123)}$	$\frac{.43}{(11)}$	$\frac{.98}{(25)}$	$\frac{1.06}{(27)}$	$\frac{.67}{(17)}$	$\frac{7.68}{(195)}$	$\frac{1.10}{(28)}$	
	VS75		$\frac{1.97}{(50)}$	$\frac{1.576}{(40)}$	$\frac{.197}{(5)}$	$\frac{8.346}{(212)}$	$\frac{1.280}{(32.5)}$	$\frac{5.335}{(135.5)}$	$\frac{.51}{(13)}$	$\frac{1.26}{(32)}$	$\frac{.02}{(.5)}$	$\frac{1.06}{(27)}$	$\frac{8.74}{(222)}$	$\frac{.85}{(21.5)}$	
	VS100		$\frac{2.44}{(62)}$	$\frac{2.047}{(52)}$	$\frac{.197}{(5)}$	$\frac{8.346}{(212)}$	$\frac{1.673}{(42.5)}$	$\frac{4.705}{(119.5)}$	$\frac{1.18}{(30)}$	$\frac{1.26}{(32)}$	$\frac{.37}{(9.5)}$	$\frac{1.22}{(31)}$	$\frac{8.74}{(222)}$	$\frac{.98}{(25)}$	
	VS150		$\frac{2.95}{(75)}$	$\frac{2.560}{(65)}$	$\frac{.197}{(5)}$	$\frac{8.346}{(212)}$	$\frac{2.165}{(55)}$	$\frac{4.961}{(126)}$	$\frac{1.10}{(28)}$	$\frac{1.42}{(36)}$	$\frac{.02}{(.5)}$	$\frac{.85}{(21.7)}$	$\frac{8.74}{(222)}$	$\frac{1.81}{(46)}$	$\frac{1.91}{(48.5)}$
VD-SERIES	VD20		$\frac{1.773}{(45)}$	$\frac{1.50}{(38)}$	$\frac{.138}{(3.5)}$	$\frac{4.02}{(102)}$				$\frac{1.10}{(28)}$		N/A	$\frac{4.331}{(110)}$	N/A	
	VD75		$\frac{3.11}{(79)}$	$\frac{2.76}{(70)}$	$\frac{.177}{(4.5)}$	$\frac{6.50}{(165)}$	$\frac{1.54}{(39)}$	$\frac{4.13}{(105)}$	$\frac{4.88}{(124)}$	$\frac{1.57}{(40)}$	$\frac{.49}{(12.5)}$	$\frac{1.73}{(44)}$	$\frac{6.89}{(175)}$	$\frac{2.36}{(60)}$	
VT-SERIES	VT15		$\frac{2.17}{(55)}$	$\frac{1.773}{(45)}$	$\frac{.197}{(5)}$	$\frac{5.315}{(135)}$			$\frac{4.57}{(116)}$	$\frac{.98}{(25)}$	$\frac{1.69}{(43)}$	$\frac{.81}{(20.5)}$	$\frac{5.71}{(145)}$	$\frac{.85}{(21.5)}$	
	VT30		$\frac{2.17}{(55)}$	$\frac{1.773}{(45)}$	$\frac{.197}{(5)}$	$\frac{6.614}{(168)}$			$\frac{5.59}{(142)}$	$\frac{.98}{(25)}$	$\frac{1.44}{(36.5)}$	$\frac{1.26}{(32)}$	$\frac{7.01}{(178)}$	$\frac{.85}{(21.5)}$	
	VT60		$\frac{2.36}{60}$	$\frac{1.969}{(50)}$	$\frac{.197}{(5)}$	$\frac{8.268}{(210)}$	$\frac{1.673}{(42.5)}$	$\frac{4.331}{(110)}$	$\frac{6.44}{(163.5)}$	$\frac{.98}{(25)}$	$\frac{.06}{(1.5)}$	$\frac{1.04}{(26.5)}$	$\frac{8.66}{(220)}$	$\frac{.93}{(23.5)}$	

V SERIES/S2 MECHANICAL DRAWINGS

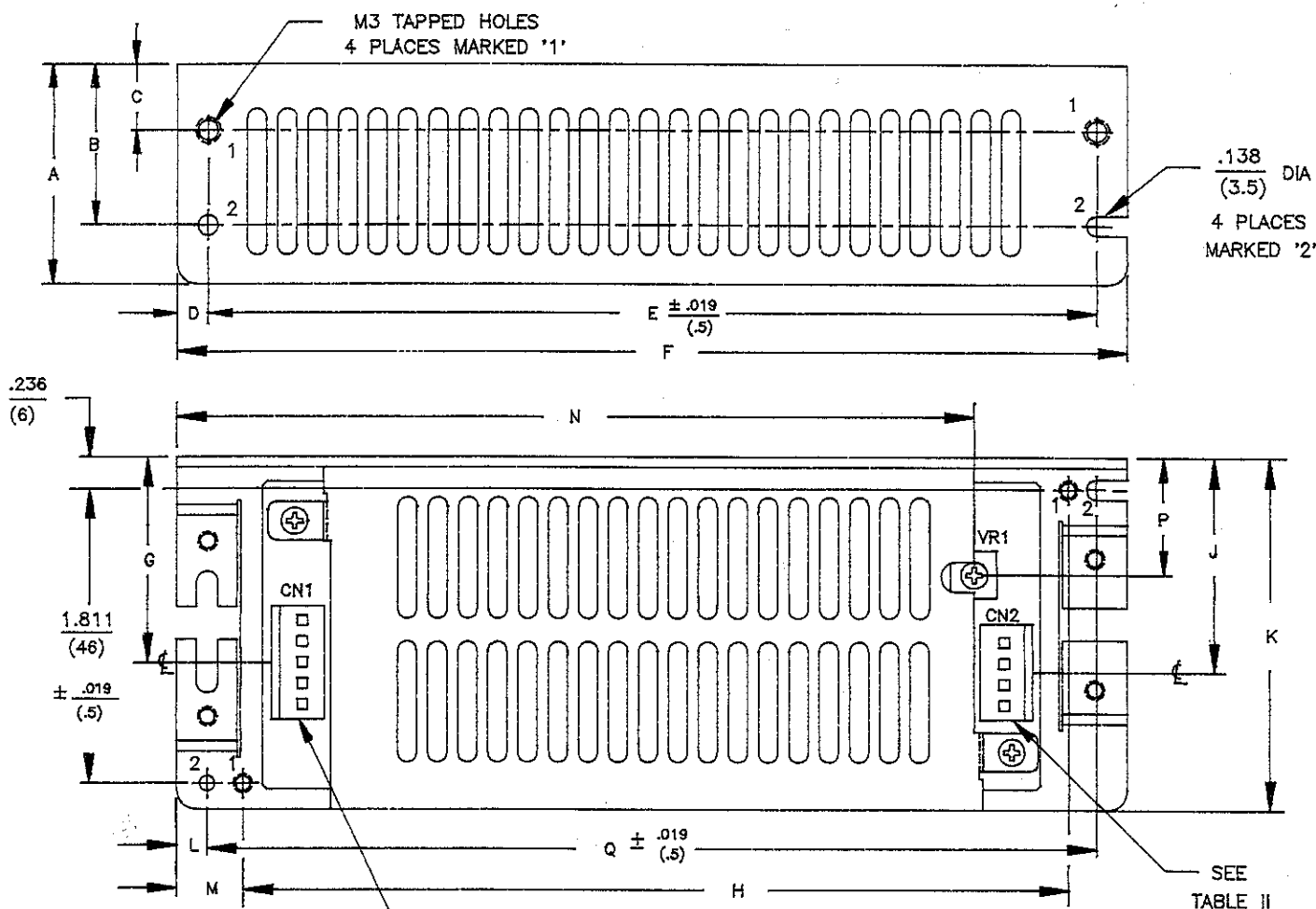


TABLE I

VS30/S2 VS50/S2	VS10/S2 VS15/S2
CN1 FG 5 N 3 L 1 INPUT	CN1 L 1 N 4 FG 7 INPUT

TABLE II

VS10/S2	VS15/S2	VS30/S2 VS50/S2
CN2 2 1 +V -V OUTPUT	CN2 4 3 2 1 +V -V OUTPUT	CN2 1 2 3 4 -V +V OUTPUT

TABLE III DIMENSIONS ARE IN INCHES (MM)

MODEL	DIM	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
VS10/S2		.98 (25)	.71 (18)	.39 (10)	.24 (6)	4.452 (113)	4.90 (124.5)	1.08 (27.5)	4.077 (103.5)	1.26 (32)	2.21 (56)	.16 (4)	.39 (10)	3.78 (96)	1.69 (43)	4.590 (116.5)
VS15/S2		.98 (25)	.71 (18)	.39 (10)	.24 (6)	5.280 (134)	5.73 (145.5)	.93 (23.5)	4.900 (124.5)	.76 (19.25)	2.21 (56)	.16 (4)	.39 (10)	4.61 (117)	1.63 (41.5)	5.417 (137.5)
VS30/S2		1.30 (33)	.96 (24)	.51 (13)	.28 (7)	5.910 (150)	6.42 (163)	1.12 (28.5)	5.513 (140)	.97 (24.5)	2.22 (56.5)	.20 (5)	.47 (12)	5.24 (133)	1.02 (26)	6.603 (154)
VS50/S2		1.30 (33)	.96 (24)	.51 (13)	.28 (7)	8.353 (212)	8.87 (225)	1.04 (26.5)	7.913 (201)	1.48 (37.5)	2.22 (56.5)	.20 (5)	.47 (12)	7.815 (198.5)	.89 (22.5)	8.504 (216)

NOTE: UNLESS OTHERWISE SPECIFIED TOLERANCE IS .039 INCHES, (1MM).