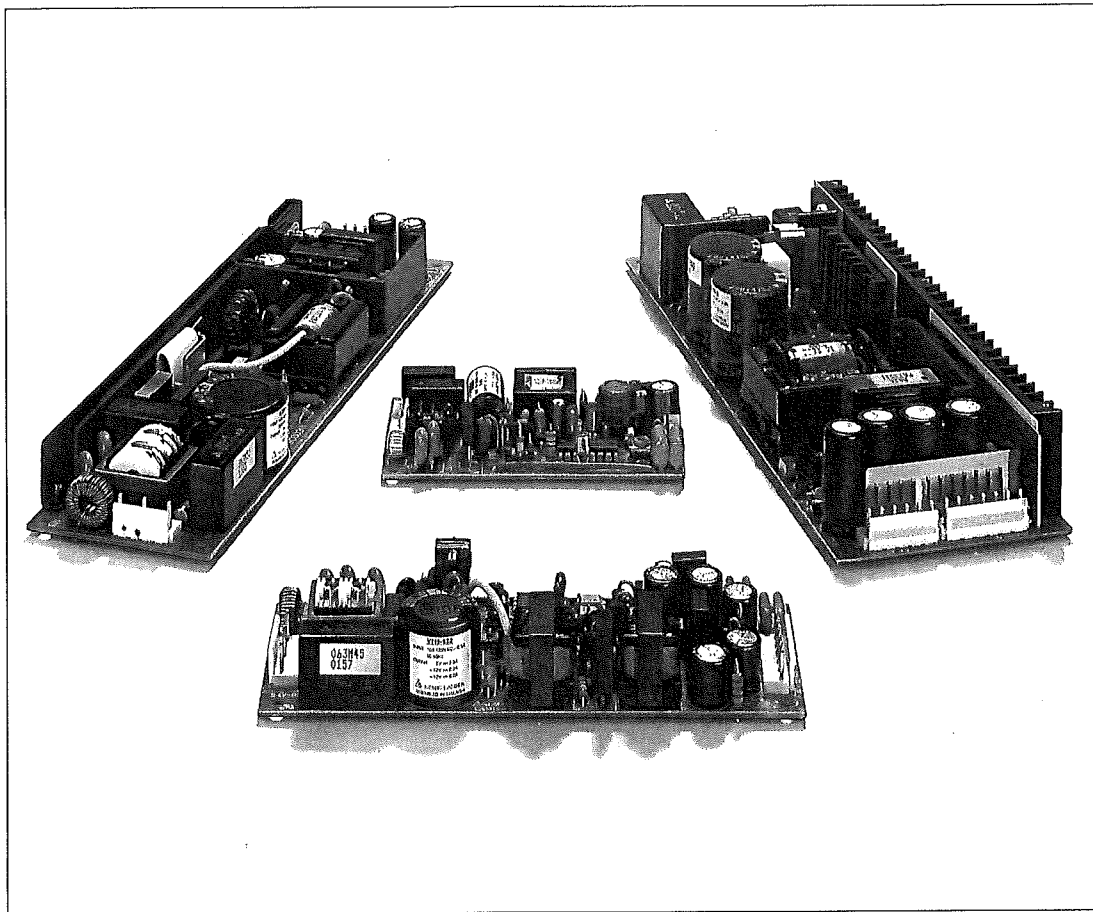


Part I – AC-to-DC Power Supplies

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 & Z 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.
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Meets Worldwide EMI Requirements	Conducted EMI to VDE 0871 Curve B and FCC Class B ensures reliable system performance.
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Ease of Manufacturing and Service	Molex type input and output connections ensure easy manufacturing and service. Mating plugs and terminals are provided.
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Meets Worldwide Safety Requirements	Safety Agency Approvals to UL1950 and CSA 1402C designed for deliverable equipment.
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Output Current Surge Capability	Dual output models are capable of providing short term output current surges, ideal for motor start applications.
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Convection Cooled	Eliminates the need for forced air cooling and/or heatsinks.
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Auxiliary Monitoring Signal	The VD20 is designed with an auxiliary monitoring signal to provide output status indication.
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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.
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One Day Delivery	Lambda's V & Z Series power supplies are in stock for one day delivery.
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Part I – AC-to-DC Power Supplies

V SERIES SPECIFICATIONS

AC Input

line85 to 132 VAC (47-440 Hz).

Efficiency

Model	Efficiency (Typical)
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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, line0.4% 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, load0.625% 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.

Z SERIES SPECIFICATIONS

AC Input

line 85-132 VAC/170-265 VAC,
47-440 Hz.

Efficiency

Package Model	Efficiency (Typical)
ZT30; ZS10-5, -12	70%
ZS10-15, -24; ZD30	71%
ZT60	72%
ZD50, ZD75	73%
ZT90	74%
ZS30-5; ZS50	75%
ZD120, ZT170	76%
ZS30-12; -15; ZS75-5	77%
ZS30-24, 36, 48; ZS75-12-15; ZS100-5; ZS150-5	78%
ZS100-12; -15; ZS150-12, -15	79%
ZS100-24; ZS150-24; ZS75-24, -36, -48	80%
ZS100-36; ZS150-36, -48	81%

DC Input

230 to 330 VDC.

EMI

Conducted EMI on the input conforms to FCC Docket 20780 Class B and VDE 0871 Class B.

DC Output

Voltage range shown in tables.

Regulated Voltage

regulation, line 0.4% maximum.
regulation, load 0.8% maximum.
ripple and noise
(pk-pk) 120mV on 5V models.
150mV on 12V models of ZD Series
and 12V and 15V models of ZS and
ZT Series.
160mV on 8V models of ZD Series.
200mV on 24V models of ZS Series.
240mV on 12V models of ZS Series.
400mV on 48V models of ZS Series.
480mV on 24V models of ZD-75.

Pre-Load Requirements

All multiple output units require pre-load on main 5V output.

Overload Protection

All outputs are short circuit protected. At no time should the average power (excluding transients) exceed the maximum continuous output power. Avoid operation in overload or dead short for sustained periods.

Overvoltage Protection

Overvoltage protection is provided on the main 5V output and all ZT Series models, CH1 of the ZD Series, and the ZS Series.

In-Rush Current Limiting

The typical turn-on current is as follows:

Series	In-Rush Current
ZD50, ZD120	20A
ZD30, ZD75	30A
ZD Series, ZT30, ZT170	15A @ 100 VAC/30A @ 200 VAC
ZT60, 90	30A

Cooling

All units are convection cooled except the ZT170 which is rated as shown with forced air cooling. Contact the factory for free convection ratings.

Isolation Rating

3750VAC input to output.
2500VAC input to ground
500VAC output to ground.

Operating Temperature Range

-10°C to +60°C.

Storage Temperature Range

-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.

Physical Data

Package Model	Lbs. Net	Lbs. Ship	Construction	Size Inches
ZS10	0.20	0.50	PCB	0.93 × 2.36 × 5.12
ZS15	0.25	0.55	PCB	0.83 × 2.36 × 5.63
ZS30	0.35	0.65	PCB	1.02 × 2.36 × 6.77
ZD30	0.48	0.70	PCB	5.50 × 3.14 × 1.03
ZS50	0.60	0.90	PCB	1.02 × 2.95 × 7.87
ZD50	0.77	1.00	PCB	7.28 × 3.54 × 1.03
ZS75	0.90	1.20	PCB	1.26 × 2.95 × 7.87
ZS100	1.00	1.30	PCB	1.46 × 3.15 × 8.74
ZD120	1.10	1.30	PCB	8.07 × 3.70 × 1.40
ZS150	1.30	1.60	PCB	1.69 × 3.54 × 8.74
ZS120P	1.10	1.40	PCB	8.19 × 3.15 × 8.74
ZT30	0.48	0.70	PCB	5.51 × 3.15 × 1.02
ZT60	.77	1.00	PCB	7.28 × 3.54 × 1.02
ZT90	1.08	1.30	PCB	8.07 × 3.70 × 1.41
ZT170	1.54	1.80	PCB	8.46 × 4.33 × 1.61

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.

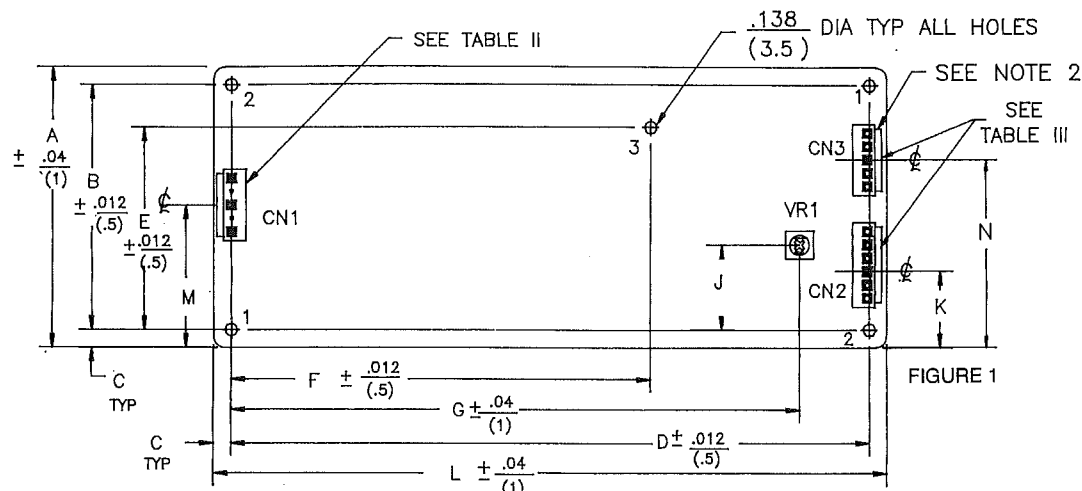
Guarantee

90 day guarantee includes parts as well as labor.

Part I – AC-to-DC Power Supplies

V AND Z SERIES MECHANICAL DRAWINGS

V SERIES
Z 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.

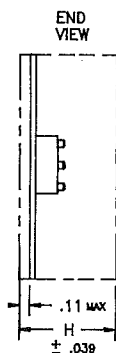


TABLE II

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

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 Z SERIES MECHANICAL DRAWINGS

TABLE I DIMENSIONS ARE IN $\frac{\text{INCHES}}{\text{MM}}$ SEE FIGURE 1

	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	$\frac{2.36}{60}$	$\frac{1.969}{(50)}$	$\frac{.197}{(5)}$	$\frac{8.268}{(210)}$	$\frac{1.673}{(42.5)}$	$\frac{4.331}{(110)}$	$\frac{6.44}{(163.5)}$	$\frac{.98}{(25)}$	$\frac{.06}{(1.5)}$	$\frac{1.04}{(26.5)}$	$\frac{8.66}{(220)}$	$\frac{.93}{(23.5)}$	

Part I – AC-to-DC Power Supplies

V AND Z SERIES MECHANICAL DRAWINGS

Inches
Table 1 (cont'd.) Dimensions are in (mm) See Figure 1

DIM MODEL	A	B	C	D	E	F	G	H	J	K	L	M	N
ZS SERIES	ZS10	$\frac{2.36}{(60)}$	$\frac{1.969}{(50)}$	$\frac{.197}{(5)}$	$\frac{4.724}{(120)}$			$\frac{.83}{(21)}$		$\frac{1.84}{(46.75)}$	$\frac{5.12}{(130)}$	$\frac{1.49}{(37.75)}$	
	ZS15	$\frac{2.36}{(60)}$	$\frac{1.969}{(50)}$	$\frac{.197}{(5)}$	$\frac{5.236}{(133)}$			$\frac{.83}{(21)}$		$\frac{1.68}{(42.75)}$	$\frac{5.63}{(143)}$	$\frac{1.51}{(38.25)}$	
	ZS30	$\frac{2.36}{(60)}$	$\frac{1.969}{(50)}$	$\frac{.197}{(5)}$	$\frac{6.378}{(162)}$	$\frac{.138}{(3.5)}$	$\frac{3.228}{(82)}$	$\frac{1.02}{(26)}$		$\frac{1.13}{(28.75)}$	$\frac{5.77}{(172)}$	$\frac{1.02}{(26.00)}$	
	ZS50	$\frac{2.95}{(75)}$	$\frac{2.559}{(65)}$	$\frac{.197}{(5)}$	$\frac{7.480}{(190)}$	$\frac{2.343}{(59.5)}$	$\frac{2.972}{(75.5)}$	$\frac{1.02}{(26)}$		$\frac{.79}{(18.75)}$	$\frac{7.87}{(200)}$	$\frac{1.56}{(39.50)}$	
	ZS75	$\frac{2.95}{(75)}$	$\frac{2.559}{(65)}$	$\frac{.197}{(5)}$	$\frac{8.346}{(212)}$	$\frac{2.146}{(54.5)}$	$\frac{2.972}{(75.5)}$	$\frac{1.26}{(32)}$		$\frac{1.75}{(44.5)}$	$\frac{8.74}{(222)}$	$\frac{1.56}{(39.50)}$	
	ZS100	$\frac{3.15}{(80)}$	$\frac{2.756}{(70)}$	$\frac{.197}{(5)}$	$\frac{8.346}{(212)}$	$\frac{2.106}{(53.5)}$	$\frac{3.996}{(101.5)}$	$\frac{1.46}{(37)}$		$\frac{1.32}{(33.5)}$	$\frac{8.74}{(222)}$	$\frac{1.67}{(42.50)}$	
	ZS150	$\frac{3.54}{(90)}$	$\frac{3.150}{(80)}$	$\frac{.197}{(5)}$	$\frac{8.346}{(212)}$	$\frac{2.677}{(68)}$	$\frac{5.433}{(138)}$	$\frac{1.69}{(43)}$		$\frac{.91}{(23)}$	$\frac{8.74}{(222)}$	$\frac{2.62}{(66.5)}$	$\frac{1.95}{(49.5)}$
THESE FIGURES NOT AVAILABLE													
ZD-SERIES	ZD30	$\frac{3.15}{(80)}$	$\frac{2.756}{(70)}$	$\frac{.197}{(5)}$	$\frac{5.118}{(130)}$			$\frac{4.47}{(113.5)}$	$\frac{1.02}{(26)}$	$\frac{.197}{(5)}$	$\frac{.76}{(19.25)}$	$\frac{5.51}{(140)}$	$\frac{2.19}{(55.5)}$
	ZD50	$\frac{3.54}{(90)}$	$\frac{3.152}{(80)}$	$\frac{.197}{(5)}$	$\frac{6.890}{(175)}$	$\frac{.827}{(21)}$	$\frac{4.67}{(118.5)}$	$\frac{5.87}{(149)}$	$\frac{1.02}{(26)}$	$\frac{.28}{(7)}$	$\frac{.76}{(19.25)}$	$\frac{7.28}{(185)}$	$\frac{1.64}{(26.5)}$
	ZD75	$\frac{3.11}{(79)}$	$\frac{2.76}{(70)}$	$\frac{.197}{(5)}$	$\frac{6.50}{(165)}$	$\frac{1.36}{(34.5)}$	$\frac{3.94}{(100)}$	$\frac{4.88}{(124)}$	$\frac{1.57}{(40)}$	$\frac{.28}{(7)}$	$\frac{1.38}{(35)}$	$\frac{6.89}{(175)}$	$\frac{2.36}{(60)}$
	ZD120	$\frac{3.70}{(94)}$	$\frac{3.30}{(84)}$	$\frac{.197}{(5)}$	$\frac{7.68}{(195)}$	$\frac{2.81}{(71.5)}$	$\frac{4.33}{(110)}$	$\frac{5.3}{(134.5)}$	$\frac{1.42}{(36)}$	$\frac{.57}{(14.5)}$	$\frac{.96}{(24.5)}$	$\frac{8.07}{(205)}$	$\frac{1.00}{(25.5)}$
ZT SERIES	ZT30	$\frac{3.15}{(80)}$	$\frac{2.756}{(70)}$	$\frac{.197}{(5)}$	$\frac{5.118}{(130)}$			$\frac{3.66}{(93)}$	$\frac{1.02}{(26)}$	$\frac{.61}{(15.5)}$	$\frac{.87}{(22)}$	$\frac{5.51}{(140)}$	$\frac{1.02}{(26)}$
	ZT60	$\frac{3.54}{(90)}$	$\frac{3.152}{(80)}$	$\frac{.197}{(5)}$	$\frac{6.890}{(175)}$	$\frac{.827}{(21)}$	$\frac{4.803}{(122)}$	$\frac{5.61}{(142.5)}$	$\frac{1.02}{(26)}$	$\frac{.55}{(14)}$	$\frac{1.30}{(33)}$	$\frac{7.28}{(185)}$	$\frac{.83}{(21)}$
	ZT90	$\frac{3.70}{(94)}$	$\frac{3.307}{(84)}$	$\frac{.197}{(5)}$	$\frac{7.677}{(195)}$	$\frac{.945}{(24)}$	$\frac{4.626}{(117.5)}$	$\frac{5.10}{(129.5)}$	$\frac{1.42}{(36)}$	$\frac{.71}{(18)}$	$\frac{1.09}{(27.75)}$	$\frac{8.07}{(205)}$	$\frac{1.11}{(28.25)}$
	ZT170	$\frac{4.33}{(110)}$	$\frac{3.937}{(100)}$	$\frac{.197}{(5)}$	$\frac{8.071}{(205)}$	$\frac{1.535}{(39)}$	$\frac{4.449}{(113)}$	$\frac{4.49}{(114)}$	$\frac{1.61}{(41)}$	$\frac{.18}{(4.5)}$	$\frac{1.36}{(34.5)}$	$\frac{8.46}{(215)}$	$\frac{3.41}{(86.5)}$
													$\frac{2.58}{(65.5)}$

V SERIES/S2 MECHANICAL DRAWINGS

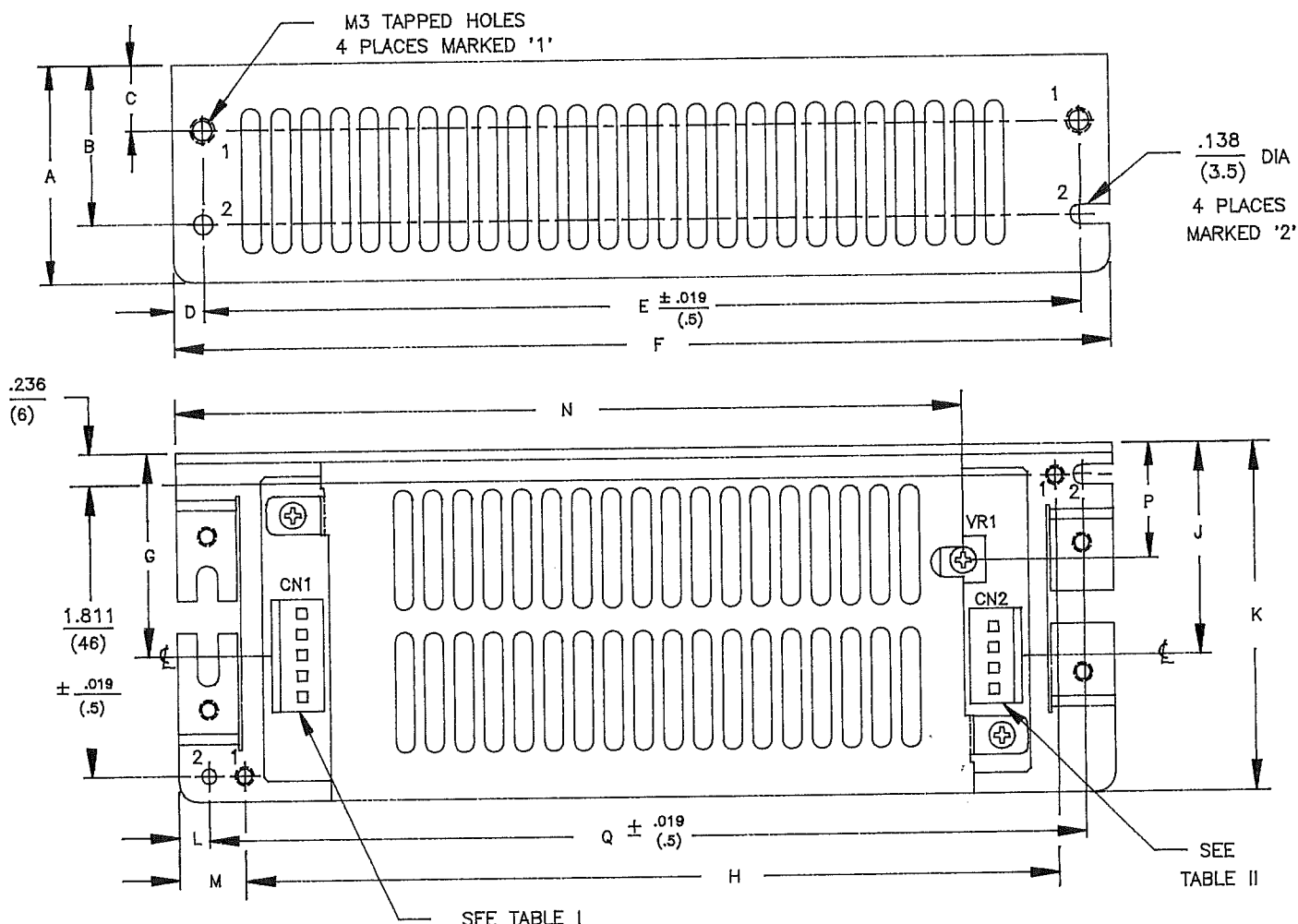


TABLE I

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 ☐ +V 1 ☐ -V OUTPUT	4 ☐ +V 3 ☐ -V 2 ☐ -V 1 ☐ -V OUTPUT CN2	1 ☐ -V 2 ☐ -V 3 ☐ +V 4 ☐ +V OUTPUT CN2

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).

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												
1.00	1.00	1.00	0.60	0.25	±5% Fixed	80	\$ 43	\$ 41	\$ 39	\$ 37	\$ 34	KS5-5
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	1.00	—	4.75-5.25	87	57	55	52	40	30	LSS-34-5
2.00	2.00	2.00	1.20	0.50	±5% Fixed	80	47	44	42	40	37	KS10-5
2.00	2.00	2.00	1.40	—	4.50-5.50	72	29	27	25	23	22	VS10-5
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	2.10	—	—	4.50-5.50	72	41	39	37	30	27	VS15-5/S2
3.00	3.00	3.00	1.50	—	4.75-5.25	87	66	64	60	50	35	LSS-35-5
3.00	3.00	3.00	1.80	0.75	±5% Fixed	80	53	50	48	45	42	KS15-5
3.00	3.00	3.00	2.10	—	4.50-5.50	72	35	33	31	26	24	VS15-5
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	2.50	—	4.75-5.25	87	101	97	93	70	56	LSS-36-5
5.00	5.00	5.00	3.75	—	4.75-5.25	83	75	72	69	51	48	LVS-44-5B
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	5.00	—	4.75-5.25	87	136	130	125	102	74	LSS-37-5
10.00	10.00	10.00	7.00	—	4.50-5.50	72	56	53	49	39	37	VS50-5
10.00	10.00	10.00	7.50	—	4.75-5.25	83	109	103	98	83	69	LVS-45-5B
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	10.00	—	4.75-5.25	87	193	184	176	156	119	LSS-38-5
20.00	20.00	20.00	14.00	—	4.50-5.50	72	87	83	77	62	57	VS100-5
30.00	30.00	30.00	15.00	—	4.75-5.25	87	275	263	251	191	164	LSS-39-5
30.00	27.00*	24.00	21.00	—	4.50-5.50	72	121	116	107	85	79	VS150-5
12V OUTPUT												
0.45	0.45	0.45	0.27	0.11	±5% Fixed	80	43	41	39	37	34	KS5-12
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
0.90	0.90	0.90	0.45	—	11.40-12.60	87	57	55	52	40	30	LSS-34-12
0.90	0.90	0.90	0.50	0.22	±5% Fixed	80	47	44	42	40	37	KS10-12
0.90	0.90	0.90	0.67	—	11.40-12.60	83	41	40	38	32	31	LVS-42-12B
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
1.30	1.30	1.30	0.65	—	11.40-12.60	87	66	64	60	50	35	LSS-35-12
1.30	1.30	1.30	0.78	0.32	±5% Fixed	80	53	50	48	45	42	KS15-12
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	1.05	—	11.40-12.60	87	101	97	93	70	56	LSS-36-12
2.10	2.10	2.10	1.57	—	11.40-12.60	83	75	72	69	51	48	LVS-44-12B
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
4.20	4.20	4.20	2.10	—	11.40-12.60	87	136	130	125	102	74	LSS-37-12
4.20	4.20	4.20	3.15	—	11.40-12.60	83	108	103	98	83	69	LVS-45-12B
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	4.25	—	11.40-12.60	87	193	184	176	156	119	LSS-38-12
8.50	8.50	8.50	5.95	—	10.80-13.20	72	87	83	77	62	57	VS100-12
12.50	12.50	12.50	6.30	—	11.40-12.60	87	275	263	251	191	164	LSS-39-12
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	0.70	0.35	—	14.25-15.75	87	57	55	52	40	30	LSS-34-15
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
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	0.70	—	—	13.50-16.50	72	41	39	37	30	27	VS15-15/S2
1.00	1.00	1.00	0.50	—	14.25-15.75	87	66	64	60	50	35	LSS-35-15
1.00	1.00	1.00	0.70	—	13.50-16.50	72	35	33	31	26	24	VS15-15
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.

*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	71°C			1	10	25	100	250	
SINGLE OUTPUT. 110VAC INPUT.												
15V OUTPUT (CONT'D.)												
1.70	1.70	1.70	0.85	—	14.25-15.75	87	\$ 101	\$ 97	\$ 93	\$ 70	\$ 56	LSS-36-15
1.70	1.70	1.70	1.27	—	14.25-15.75	83	75	72	69	51	48	LVS-44-15B
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
3.40	3.40	3.40	1.70	—	14.25-15.75	87	136	130	125	102	74	LSS-37-15
3.40	3.40	3.40	2.55	—	14.25-15.75	83	109	103	98	83	69	LVS-45-15B
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
7.00	7.00	7.00	3.50	—	14.25-15.75	87	193	184	176	156	119	LSS-38-15
10.00	9.00*	8.00	7.00	—	13.50-16.50	72	121	116	107	85	79	VS150-15
10.00	10.00	10.00	5.00	—	14.25-15.75	83	275	263	251	191	164	LSS-39-15

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
0.50	0.50	0.50	0.25	—	22.80-25.20	87	57	55	52	40	30	LSS-34-24
0.50	0.50	0.50	0.37	—	22.80-25.20	83	41	40	38	32	31	LVS-42-24B
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
0.70	0.70	0.70	0.35	—	22.80-25.20	87	66	64	60	50	35	LSS-35-24
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	0.55	—	22.80-25.20	87	101	97	93	70	56	LSS-36-24
1.10	1.10	1.10	0.82	—	22.80-25.20	83	75	72	69	51	48	LVS-44-24B
1.30	1.30	1.04	—	—	21.60-26.40	72	51	48	44	36	32	VS30-24/S2
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
2.10	2.10	2.10	1.05	—	22.80-25.20	87	136	130	125	102	74	LSS-37-24
2.10	2.10	2.10	1.57	—	22.80-25.20	72	109	103	98	83	69	LVS-45-24B
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
4.50	4.50	4.50	2.25	—	22.80-25.20	87	193	184	176	156	119	LSS-38-24
6.30	5.67*	5.04	4.41	—	21.60-26.40	72	121	116	107	85	79	VS150-24
6.50	6.50	6.50	3.25	—	22.80-25.20	87	275	263	251	191	164	LSS-39-24

28V OUTPUT

0.40	0.40	0.40	0.20	—	26.60-29.40	87	57	55	52	40	30	LSS-34-28
0.60	0.60	0.60	0.30	—	26.60-29.40	87	66	64	60	50	35	LSS-35-28
0.90	0.90	0.90	0.45	—	26.60-29.40	87	101	97	93	70	56	LSS-36-28
1.80	1.80	1.80	1.35	—	26.60-29.40	83	109	103	98	83	69	LVS-45-28B
1.80	1.80	1.80	0.90	—	26.60-29.40	87	136	130	125	102	74	LSS-37-28
3.80	3.80	3.80	1.90	—	26.60-29.40	87	193	184	176	156	119	LSS-38-28
5.50	5.50	5.50	2.75	—	26.60-29.40	87	275	263	251	191	164	LSS-39-28

48V OUTPUT

0.20	0.20	0.20	0.10	—	45.60-50.40	87	57	55	52	40	30	LSS-34-48
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	0.15	—	45.60-50.40	87	66	64	60	50	35	LSS-35-48
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	0.25	—	45.60-50.40	87	101	97	93	70	56	LSS-36-48
0.50	0.50	0.50	0.37	—	45.60-50.40	83	75	72	69	51	48	LVS-44-48B
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
1.00	1.00	1.00	0.75	—	45.60-50.40	83	109	103	98	83	69	LVS-45-48B
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 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.											
5V OUTPUT											
1.00	1.00	1.00	0.60	±5% Fixed	80	\$ 49	\$ 47	\$ 44	\$ 42	\$ 39	KWS5-5
2.00	2.00	2.00	1.20	±5% Fixed	80	56	53	51	48	45	KWS10-5
2.00	2.00	2.00	1.40	4.50-5.50	73	44	40	37	33	32	ZS10-5
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
3.00	3.00	3.00	1.80	±5% Fixed	80	82	78	74	70	65	KWS15-5
3.00	3.00	3.00	2.10	4.50-5.50	73	52	50	46	39	36	ZS15-5
5.00	5.00	5.00	3.75	4.75-5.25	87	105	101	97	84	76	LVS-44E-5
6.00	6.00	6.00	4.20	4.50-5.50	73	67	63	58	48	44	ZS30-5
10.00	10.00	10.00	7.00	4.50-5.50	73	84	79	72	58	55	ZS50-5
10.00	10.00	10.00	7.50	4.75-5.25	87	141	136	130	115	102	LVS-45E-5
15.00	15.00	15.00	9.00	4.50-5.50	73	107	102	94	75	68	ZS75-5
20.00	20.00	20.00	14.00	4.50-5.50	73	131	124	114	93	85	ZS100-5
30.00	27.00*	24.00	21.00	4.50-5.50	73	195	186	172	138	126	ZS150-5
12V OUTPUT											
0.45	0.45	0.45	0.27	±5% Fixed	80	49	47	44	42	39	KWS5-12
0.85	0.85	0.85	0.60	10.80-13.20	73	44	40	37	33	32	ZS10-12
0.90	0.90	0.90	0.50	±5% Fixed	80	56	53	51	48	45	KWS10-12
0.90	0.90	0.90	0.67	11.40-12.60	87	59	57	54	46	41	LVS-42E-12
1.25	1.25	1.25	0.88	10.80-13.20	73	52	50	46	39	36	ZS15-12
1.30	1.30	1.30	0.78	±5% Fixed	80	82	78	74	70	65	KWS15-12
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
2.50	2.50	2.50	1.75	10.80-13.20	73	67	63	58	48	44	ZS30-12
4.20	4.20	4.20	3.15	11.40-12.60	87	141	136	130	115	102	LVS-45E-12
4.30	4.30	4.30	3.01	10.80-13.20	73	84	79	72	58	55	ZS50-12
6.30	6.30	6.30	3.78	10.80-13.20	73	107	102	94	75	68	ZS75-12
8.50	8.50	8.50	5.95	10.80-13.20	73	131	124	114	93	85	ZS100-12
12.50	11.25*	10.00	8.75	10.80-13.20	73	195	186	172	138	126	ZS150-12
15V OUTPUT											
0.35	0.35	0.35	0.20	±5% Fixed	80	49	47	44	42	39	KWS5-15
0.70	0.70	0.70	0.25	14.25-15.75	83	59	57	54	46	41	LVS-42E-15
0.70	0.70	0.70	0.40	±5% Fixed	80	56	53	51	48	45	KWS10-15
0.70	0.70	0.70	0.49	13.50-16.50	73	44	40	37	33	32	ZS10-15
1.00	1.00	1.00	0.60	±5% Fixed	80	82	78	74	70	65	KWS15-15
1.00	1.00	1.00	0.70	13.50-16.50	73	52	50	46	39	36	ZS15-15
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
2.00	2.00	2.00	1.40	13.50-16.50	73	67	63	58	48	44	ZS30-15
3.40	3.40	3.40	2.55	14.25-15.75	87	141	136	130	115	102	LVS-45E-15
3.50	3.50	3.50	2.55	13.50-16.50	73	84	79	72	58	55	ZS50-15
5.00	5.00	5.00	3.00	13.50-16.50	73	107	102	94	75	68	ZS75-15
6.70	6.70	6.70	4.69	13.50-16.50	73	131	124	114	93	85	ZS100-15
10.00	9.00*	8.00	7.00	13.50-16.50	73	195	186	172	138	126	ZS150-15
24V OUTPUT											
0.45	0.45	0.45	0.32	21.60-26.40	73	44	40	37	33	32	ZS10-24
0.50	0.50	0.50	0.37	22.80-25.20	87	59	57	54	46	41	LVS-42E-24
0.65	0.65	0.65	0.46	21.60-26.40	73	52	50	46	39	36	ZS15-24
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
1.30	1.30	1.30	0.91	21.60-26.40	73	67	63	58	48	44	ZS30-24
2.10	2.10	2.10	1.47	21.60-26.40	73	84	79	72	58	55	ZS50-24
2.10	2.10	2.10	1.57	22.80-25.20	87	141	136	130	115	102	LVS-45E-24
3.20	3.20	3.20	1.92	21.60-26.40	73	107	102	94	75	68	ZS75-24
4.30	4.30	4.30	3.01	21.60-26.40	73	131	124	114	93	85	ZS100-24
5.00	5.00	3.50	—	22.80-25.20	73	135	120	108	87	78	ZS120P-24
6.30	5.67*	5.04	4.41	21.60-26.40	73	195	186	172	138	126	ZS150-24

*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
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48V OUTPUT

0.70	0.70	0.70	0.49	43.20-52.80	73	67	63	58	48	44	ZS30-48
1.00	1.00	1.00	0.75	45.60-50.40	87	141	136	130	115	102	LVS-45E-48
1.10	1.10	1.10	0.77	43.20-52.80	73	84	79	72	58	55	ZS50-48
1.60	1.60	1.60	0.96	43.20-52.80	73	107	102	94	75	68	ZS75-48
2.10	2.10	2.10	1.47	43.20-52.80	73	131	124	114	93	85	ZS100-48
3.20	2.88*	2.56	2.24	43.20-52.80	73	195	186	172	138	126	ZS150-48

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

8V, 24V OUTPUT

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

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. 110/220VAC INPUT.

5V, 12V OUTPUT

5V	1.00	1.00	0.70	30.20	30.20	21.00	±5% Fixed	73	\$ 78	\$ 73	\$ 70	\$ 56	\$ 52	ZD30-1205
12V	2.10	2.10	1.90				12.00-12.60							
5V	1.00	1.00	0.70	53.00	53.00	37.10	±5% Fixed	73	95	91	85	69	64	ZD50-1205
12V	4.00	4.00	2.80				12.00-12.60							
5V	3.00	2.10	1.20	51.00	35.70	20.40	4.75- 5.25	73	77	72	66	53	49	ZD75-0512
12V	3.00	2.10	1.20				±5% Fixed							
5V	2.50	2.50	1.75	120.50	120.50	84.30	±5% Fixed	73	135	129	122	97	90	ZD120-1205
12V	9.00	9.00	6.30				12.00-12.60							

5V, 24V OUTPUT

5V	1.00	1.00	0.70	31.40	31.40	22.00	±5% Fixed	73	78	73	70	56	52	ZD30-2405
24V	1.10	1.10	0.77				24.00-25.20							
5V	1.00	1.00	0.70	53.00	53.00	37.10	±5% Fixed	73	95	91	85	69	64	ZD50-2405
24V	2.00	2.00	1.40				24.00-25.20							
5V	3.00	2.10	1.20	63.00	44.10	25.20	4.75- 5.25	73	77	72	66	53	49	ZD75-0524
24V	2.00	1.40	0.80				±5% Fixed							
5V	2.50	2.50	1.75	120.50	120.50	84.30	±5% Fixed	73	135	129	122	97	90	ZD120-2405
24V	4.50	4.50	3.15				24.00-25.20							

8V, 24V OUTPUT

8V	0.70	0.70	0.49	32.00	32.00	22.40	±5% Fixed	73	78	73	70	56	52	ZD30-2408
24V	1.10	1.10	0.77				24.00-25.20							
8V	0.70	0.70	0.49	53.60	53.60	37.50	±5% Fixed	73	95	91	85	69	64	ZD50-2408
24V	2.00	2.00	1.40				24.00-25.20							
8V	2.00	1.40	0.80	64.00	44.80	25.60	7.60- 8.40	73	77	72	66	53	49	ZD75-0824
24V	2.00	1.40	0.80				±5% Fixed							
8V	2.00	2.00	1.40	124.00	124.00	86.80	±5% Fixed	73	135	129	122	97	90	ZD120-2408
24V	4.50	4.50	3.15				24.00-25.20							

*Rating for ZS150 is at 35°C.

Commercial Ratings Table – Triple Output

K SERIES
• PCB Mount
• Small Footprint
• High Density

V SERIES
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• 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	2.00	2.00	1.40	16.00	16.00	11.20	5.00-5.25	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	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							
5	3.00	3.00	2.10	33.00	33.00	23.10	5.00-5.25	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	7.00	7.00	4.55	50.00	50.00	32.50	5.00-5.25	87	158	151	145	102	86	LST-37-133
+12	1.50	1.50	0.97				±5% Fixed							
-12	0.50	0.50	0.32				±5% Fixed							
5	5.00	5.00	3.50	55.00	55.00	38.50	5.00-5.25	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							
5	8.00	8.00	5.20	76.00	76.00	49.40	5.00-5.25	87	197	187	179	131	116	LST-38-133
+12	3.20	3.20	2.00				±5% Fixed							
-12	0.50	0.50	0.32				±5% Fixed							
5	13.00	13.00	8.50	101.00	101.00	65.60	5.00-5.25	87	227	216	207	156	142	LST-39-133
+12	4.00	4.00	2.60				±5% Fixed							
-12	1.00	1.00	0.65				±5% Fixed							
5	20.00	20.00	13.60	160.00	160.00	126.50	5.00-5.25	87	297	283	271	218	192	LST-40-133
+12	5.00	5.00	3.40				±5% Fixed							
-12	2.00	2.00	1.40				±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	2.00	2.00	1.40	17.50	17.50	12.25	5.00-5.25	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	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	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							
5	5.00	5.00	3.50	56.50	56.50	39.55	5.00-5.25	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							
5	7.00	7.00	4.55	50.00	50.00	32.50	5.00-5.25	87	158	151	145	102	86	LST-37-144
+15	1.20	1.20	0.78				±5% Fixed							
-15	0.50	0.50	0.32				±5% Fixed							
5	8.00	8.00	5.20	75.00	75.00	49.00	5.00-5.25	87	197	187	179	131	116	LST-38-144
+15	2.50	2.50	1.60				±5% Fixed							
-15	0.50	0.50	0.32				±5% Fixed							
5	13.00	13.00	8.45	103.00	103.00	67.00	5.00-5.25	87	227	216	207	156	142	LST-39-144
+15	3.20	3.20	2.00				±5% Fixed							
-15	1.00	1.00	0.65				±5% Fixed							
5	20.00	20.00	13.60	160.00	160.00	129.50	5.00-5.25	87	297	283	271	218	192	LST-40-144
+15	4.00	4.00	2.70				±5% Fixed							
-15	2.00	2.00	1.40				±5% Fixed							
5V, + 12V, - 5V OUTPUT														
5	2.00	2.00	1.40	14.60	14.60	10.22	5.00-5.25	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	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	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							

Commercial Ratings Table – Triple Output

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• 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.	UNIT PRICE PER DELIVERED QUANTITY					MODEL
	40°C	50°C	60°C	40°C	50°C	60°C			1	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							
5	3.00	3.00	2.10	33.00	33.00	23.10	5.00-5.25	73	89	84	78	63	57	ZT30-522
+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	61.00	61.00	42.70	5.00-5.25	73	107	102	94	75	69	ZT60-522
+12	2.50	2.50	1.75				±5% Fixed							
-12	0.50	0.50	0.35				±5% Fixed							
5	10.00	10.00	7.00	92.00	92.00	64.40	5.00-5.25	73	141	135	125	100	93	ZT90-522
+12	3.00	3.00	2.10				±5% Fixed							
-12	0.30	0.30	0.21				±5% Fixed							
5	20.00	20.00	14.00	172.00	172.00	120.40	5.00-5.25	73	214	203	188	150	139	ZT170-522*
+12	5.00	5.00	3.50				±5% Fixed							
-12	1.00	1.00	0.70				±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	3.00	2.10	34.50	34.50	24.15	5.00-5.25	73	89	84	78	63	57	ZT30-5FF
+15	1.00	1.00	0.70				±5% Fixed							
-15	0.30	0.30	0.21				±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							
5	5.00	5.00	3.50	62.50	62.50	43.75	5.00-5.25	73	107	102	94	75	69	ZT60-5FF
+15	2.00	2.00	1.40				±5% Fixed							
-15	0.50	0.50	0.35				±5% Fixed							
5	10.00	10.00	7.00	95.00	95.00	66.50	5.00-5.25	73	141	135	125	100	93	ZT90-5FF
+15	2.50	2.50	1.75				±5% Fixed							
-15	0.50	0.50	0.35				±5% Fixed							
5	20.00	20.00	14.00	175.00	175.00	122.50	5.00-5.25	73	214	203	188	150	139	ZT170-5FF*
+15	4.00	4.00	2.80				±5% Fixed							
-15	1.00	1.00	0.70				±5% Fixed							
5V, + 12V, - 5V OUTPUT														
5	3.00	3.00	2.10	30.90	30.90	21.63	5.00-5.25	73	89	84	78	63	57	ZT30-525
+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	57.50	57.50	40.25	5.00-5.25	73	107	102	94	75	69	ZT60-525
+12	2.50	2.50	1.75				±5% Fixed							
-5	0.50	0.50	0.35				±5% Fixed							
5	10.00	10.00	7.00	88.50	88.50	61.95	5.00-5.25	73	141	135	125	100	93	ZT90-525
+12	3.00	3.00	2.10				±5% Fixed							
-5	0.50	0.50	0.35				±5% Fixed							
5	20.00	20.00	14.00	165.00	165.00	115.50	5.00-5.25	73	214	203	188	150	139	ZT170-525*
+12	5.00	5.00	3.50				±5% Fixed							
-5	1.00	1.00	0.70				±5% Fixed							

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