



1U Switching Regulated Rack Mounting & Benchtop single output & wide adjust output with optional auxiliary output AC-DC

• Five Year Warranty



Don't forget these facts about Acopian....

- 1. We ship within 3 Days (see our 3 Day Shipping Promise below).
- 2. Acopian power supplies last a *very long time*.
- 3. The Voltage Finder is the quickest way to find a power supply with the specs you need.
- 4. The Online System builder (www.acopian.com/SystemBuilder) is a convenient way to get your own custom Power System (and they ship within 9 Days).
- 5. You always talk to a real person when you call Acopian.
- 6. You can order your Acopian power supplies factory direct.
- 7. You can order your Acopian power supplies online.
- 8. All Acopian products are made in the USA.

Acopian





single output & wide adjust output with optional auxiliary output (to 180 watts) **1U SWITCHING REGULATED (to 720 watts)**

(Power Factor Correction and Universal Input)

RACK MOUNTING & BENCHTOP AC-DC

• Five Year Warranty

STANDARD FEATURES

- Universal input
- Power Factor Correction
- · Constant voltage and constant current modes
- · Short circuit and overload protection
- Thermal protection
- No minimum load required
- Adjustable down to 0 volts ('Wide Adjust' models)
- Internal EMI Filter and RFI Shielding
- · Pluggable connectors for input and control wiring
- Remote Sensing
- 'Soft start' operation
- Output Programming ('Wide Adjust' models)
- Voltage and Current monitors
- Output Inhibit (or Enable)
- Vok ('Single Output' models)

SPECIFICATIONS

Input Voltage: 95-265 VAC, 49-420 Hz, single phase. AC Input, max.: 8A (450W), 12A (720W)

Inrush current: Cold start, (thermistor limiter) 33A peak @ 115 VAC (typical); 65A peak @ 230 VAC (typical).

Startup Time: 800 mS (typical).

Input Undervoltage: An input of less than 95 VAC will not damage power supply.

Power Factor: 0.99 typical at 115 VAC, 60Hz and full load. Complies with EN61000-3-2.

Regulation (in constant voltage mode): Line Regulation: ±0.05% or 5 mV, whichever is greater. Load Regulation: ±0.05% or 5 mV, whichever is greater.

Regulation, Ripple (in constant current mode): Line Regulation: ±0.2% or 30mA. Load Regulation: ±0.5% or 100mA. Current Ripple: 0.5% rms.

Ambient Operating Temperature: 0 to +71°C.

Temperature Coefficient (after 30 minute warm-up): Voltage mode; ±0.02%/°C (typical).

Current mode; ±0.1%/°C (typical).

Drift (voltage mode or current mode): ±0.1% (typical) over 8 hours, after 30 minute warmup.

Storage Temperature: -40 to +85°C.

Holdup Time: 20mS minimum with full load.

Transient Response: 300 μ S to return to ±1% of output setting. Maximum of ±3% output excursion following a load step change from 50% to 100%.

240

LEW!

30.0

Efficiency: See table. (Typical, at 115 VAC, with full load.)

Polarity: Output is floating and may be used in either polarity.

Remote Sensing: Compensates up to 0.5 Vdc drop per output line (or within the limits of the output voltage adjustment range). Present on both primary and auxiliary outputs. (Wide Adjust models compensate up to 0.5 Vdc drop per output line.)

Output Adjustment: Voltage and current adjustments are accessible through the rear panel. No current adjustment for auxiliary output.

Output Programming (Wide Adjust models only): The output voltage and current may be programmed from 0 to full rating by means of control voltage inputs of 0 to +10Vdc (0 to +5Vdc for models with option "C5"). Voltage mode accuracy: 0.5%. Current mode accuracy: 3% for models with greater than 10 amps output current and 4% for models with less than 10 amps output current. Accuracy percentages do not apply below 5% of output rating.

Voltage Monitor Terminal: Permits remote monitoring of output voltage, stepped down by a ratio of 10:1 (for 3.3v to 90v models) or 100:1 (for 100v to 135v models). Accuracy is 0.5% of maximum rated output voltage.

For models with 0-5v programming option "C5": Permits remote monitoring of output voltage, stepped down by a ratio of 10:1 (for 3.3v to 45v models) or 100:1 (for 48v to 135v models). Accuracy is 0.5% of maximum rated output voltage.

Current Monitor Terminal: For models with greater than 10 amps output current: permits remote monitoring of output current, stepped down by a ratio of 100 mV/Amp (accuracy is 3% of maximum rated output current). For models with less than 10 amps output current: permits remote monitoring of output current, stepped down by a ratio of 1000 mV/Amp (accuracy is 3% of maximum rated output current).

For models with 0-5v programming option "C5": For models with greater than 45 amps output current: permits remote monitoring of output current, stepped down by a ratio of 10 mV/Amp (accuracy is 5% of maximum rated output current). For models with less than 45 amps output current: permits remote monitoring of output current, stepped down by a ratio 100 mV/Amp (accuracy is 3% of maximum rated output current).



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1U SWITCHING REGULATED

Overload/Short Circuit Protection: A short or overload forces the power supply into constant current mode, with automatic recovery.

Overvoltage Protection: Latches power supply OFF, reset by momentarily removing AC input power. (Models with 'N' option reset automatically.)

Thermal Protection: Thermostat(s), self-resetting.

Internal Failure Protection: Provided by internal fuse.

Output Inhibit: Applying between +3 and +15 Vdc to the Inhibit terminal will disable the supply. 'Output Enable' is also available (see Options).

V ok (Single Output models): When the power supply's output voltage is between -10% and +15% of the nominal output voltage, 'V ok' will be between +3 and +5Vdc (high). When the output voltage is outside the -10%, +15% window, the 'V ok' voltage will go low (approx 0.5 Vdc). 'V ok' can source 1 mA or sink up to 5 mA.

Switching Frequency: 110 kHz (typical).

EMI: Designed to meet FCC Part 15 and EN55022, Class A.

Dielectric Withsta	nd Voltage	Isolation
Input to output:	4242 Vdc	300 Vdc
Input to case:	2121 Vdc	300 Vdc
Output to case:	750 Vdc	300 Vdc

Cooling: Forced-air cooled. Air enters front of power supply and exits from rear cover. Fan speed is controlled by thermostat. High Speed Fan noise rated at 48dB for 450w models and 54dB for 720w models.

Mounting: Rack Mounting models are designed expressly for mounting in standard 19[°] wide RETMA cabinet racks. Benchtop models rest on four rubber feet.

OPTIONS

Output Enable: To enable the DC output, the Inhibit terminal must be tied to the -DC output. An open collector or contact closure can be used. To order, add suffix "E" to the model number. No increase in price.

Handles: To order, add suffix "H" to the model number, and increase standard price by \$15.00.

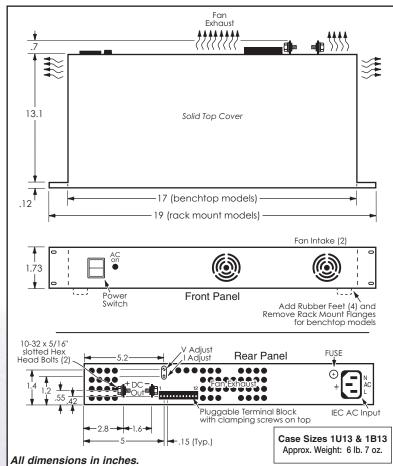
Digital Voltage and Current Meters: To order, add suffix "M3" to the model number, and increase standard price by \$120.00.

Output Blocking Protection Diode: Used for battery charging or redundant applications. Derate output by 10%. To order, add suffix "E1" to the model number, and increase standard price by \$15.00. (Not available with N or P options.)

Front Panel Adjust (Wide Adjust models): Voltage and current adjustment knobs available on front panel. To order, add suffix "C1" to the model number, and increase standard price by \$50.00.

Output Indicator(s) (DC on) (Single Output models): Front panel mounted green LED(s). To order, add suffix "G3" to the model number, and increase standard price by \$20.00

N+1 Redundancy (Single Output models): Allows up to 4 like models to be wired in N+1 redundancy. An internal isolation OR-ing diode is included in each power supply. Current share accuracy is $\pm 5\%$ (typical). Power supply output current must be derated by 10%. This option incorporates the "P" (**Parallelable**) option and the "E1" (**Output Blocking Protection Diode**) option, so if you



specify the "N" option do not also specify the "P" or "E1" options. To order, add suffix "N" to the model number, and increase standard price by \$50.00.

Parallelable (Single Output models): Allows up to 4 like models to be directly wired in parallel for increased current capability. Current share accuracy is ±5% (typical). Power supply output current must be derated by 5%. This option is included in the "N" (**N+1 Redundancy**) option listed above, so if you specify the "N" option, do not also specify the "P" option. To order, add suffix "P" to the model number, and increase standard price by \$25.00.

0-5v Programming (Wide Adjust Models - instead of the standard 0-10v Programming): Output voltage and current of standard models may be programmed from 0 to full rating by means of control voltage inputs of 0 to +10Vdc. For programming with 0 to +5Vdc control voltages, add suffix "C5" to the model number, and increase standard price by \$40.00. Voltage mode accuracy: 1%. Current mode accuracy: 5%. Accuracy percentages do not apply below 5% of output rating.

Relay Alarm Contacts (Single Output models): NC/C/NO relay contacts that change state when output voltage drops more than 10% below nominal. To order, add suffix "G1" to model number, and increase standard price by \$25.00. (Not available with Auxiliary Output option.)

Chassis Slides (Rack Mounting models): For racks having rear mounting rails spaced 18" to 24" behind the front panel. To order, add suffix "S" to the model number and increase standard price by \$90.00.

Auxiliary Output: Choose desired voltage from the 'Optional Auxiliary Output' table on page 6. To order, use the 'Model' column to determine suffix and see page 6 for cost increase. (Not available with C1 or G1 options.)

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1U SWITCHING REGULATED (to 720 watts)

Nominal Output	Adjust Range		Current os. at	Ripp (@ 25 N	le mV /IHz BW)	Effic. (Typ.)	(\$)		Case		Nominal Output	Adjust Range		Current os. at		le mV /IHz BW)	Effic. (Typ.)	(\$)		Case
Voltage	±Ϋ	40°C	71°C	RMS	P-P	%	Price	Model	Size		Voltage	±Ϋ	40°C	71°C	RMS	P-P	%	Price	Model	Size
3.3	.25	40	30	15	50	61	810	W3.3LTU4000	1U13		32	1	14	9.8	45	150	78	810	W32LTU1400	1U13
3.3	.25	70	49	15	50	61	995	W3.3LTU7000	1U13		32	1	22.5	15.8	45	150	78	995	W32LTU2250	1U13
5	.25	40	30	15	50	64	810	W5LTU4000	1U13		34	1	13.2	9.3	45	150	78	810	W34LTU1320	1U13
5	.25	70	49	15	50	64	995	W5LTU7000	1U13		34	1	21.2	14.8	45	150	78	995	W34LTU2120	1U13
6	.25	40	30	15	50	65	810	W6LTU4000	1U13		36	1	12.5	8.8	45	150	78	810	W36LTU1250	1U13
6	.25	68	47.6	15	50	65	995	W6LTU6800	1U13		36	1	20	14	45	150	78	995	W36LTU2000	1U13
7	.5	40	29	15	50	65	810	W7LTU4000	1U13		38	1	11.8	8.3	45	150	78	810	W38LTU1180	1U13
7	.5	66	46.2	15	50	65	995	W7LTU6600	1U13		38	1	18.9	13.2	45	150	78	995	W38LTU1890	1U13
8	.5	39	28	30	100	67	810	W8LTU3900	1U13		40	1	11.3	7.9	45	150	79	810	W40LTU1130	1U13
8	.5	64	44.8	30	100	67	995	W8LTU6400	1U13		40	1	18	12.6	45	150	79	995	W40LTU1800	1U13
9	.5	38.8	27.2	30	100	67	810	W9LTU3880	1U13		42	1	10.7	7.5	45	150	79	810	W42LTU1070	1U13
9	.5	62	43.4	30	100	67	995	W9LTU6200	1U13		42	1	17.1	12	45	150	79	995	W42LTU1710	1U13
10	.5	37.5	26.3	30	100	68	810	W10LTU3750	1U13		45	1	10	7	45	150	79	810	W45LTU1000	1U13
10	.5	60	42	30	100	68	995	W10LTU6000	1U13		45	1	16	11.2	45	150	79	995	W45LTU1600	1U13
12	1	37.5	26.3	30	100	73	810	W12LTU3750	1U13	2.83	48	1	9.4	6.6	45	150	79	810	W48LTU940	1U13
12	1	60	42	30	100	73	995	W12LTU6000	1U13	1.5	48	1	15	10.5	45	150	79	995	W48LTU1500	1U13
13	1	34.6	24.2	30	100	73	810	W13LTU3460	1U13		50	1	9	6.3	44	150	79	810	W50LTU900	1U13
13	1	55.4	38.8	30	100	73	995	W13LTU5540	1U13		50	1	14.4	10	44	150	79	995	W50LTU1440	1U13
14	1	32.1	22.5	30	100	73	810	W14LTU3210	1U13		55	1	8.2	5.7	44	150	79	810	W55LTU820	1U13
14	1	51.4	35.9	30	100	73	995	W14LTU5140	1U13		55	1	13.1	9.2	44	150	79	995	W55LTU1310	1U13
15	1	30	21	30	100	73	810	W15LTU3000	1U13	2.62	60	1	7.5	5.3	44	150	79	810	W60LTU750	1U13
15	1	48	33.6	30	100	73	995	W15LTU4800	1U13		60	1	12	8.4	44	150	79	995	W60LTU1200	1U13
16	1	28.1	19.7	30	100	73	810	W16LTU2810	1U13	13.44	70	1	6.4	4.5	66	225	79	810	W70LTU640	1U13
16	1	45	31.5	30	100	73	995	W16LTU4500	1U13		70	1	10.3	7.2	66	225	79	995	W70LTU1030	1U13
18	1	25	17.5	30	100	75	810	W18LTU2500	1U13		75	1	6	4.2	66	225	79	810	W75LTU600	1U13
18	1	40	28	30	100	75	995	W18LTU4000	1U13		75	1	9.6	6.7	66	225	79	995	W75LTU960	1U13
20	1	22.5	15.8	30	100	76	810	W20LTU2250	1U13	The second	80	1	5.6	3.9	66	225	79	810	W80LTU560	1U13
20	1	36	25.2	30	100	76	995	W20LTU3600	1U13		80	1	9	6.3	66	225	79	995	W80LTU900	1U13
22	1	20.5	14.4	30	100	76	810	W22LTU2050	1U13		90	1	5	3.5	66	225	79	810	W90LTU500	1U13
22	1	32.7	22.9	30	100	76	995	W22LTU3270	1U13		90	1	8	5.6	66	225	79	995	W90LTU800	1U13
24	1	18.8	13.2	30	100	78	810	W24LTU1880	1U13		100	1	4.5	3.2	88	300	79	810	W100LTU450	1U13
24	1	30	21	30	100	78	995	W24LTU3000	1U13		100	1	7.2	5	88	300	79	995	W100LTU720	1U13
25	1	18	12.6	30	100	78	810	W25LTU1800	1U13		110	1	4.1	2.9	88	300	79	810	W110LTU410	1U13
25	1	28.8	20.2	30	100	78	995	W25LTU2880	1U13		110	1	6.5	4.5	88	300	79	995	W110LTU650	1U13
26	1	17.3	12.1	30	100	78	810	W26LTU1730	1U13		120	1	3.8	2.7	88	300	79	810	W120LTU380	1U13
26	1	27.7	19.4	30	100	78	995	W26LTU2770	1U13		120	1	6	4.2	88	300	79	995	W120LTU600	1U13
28	1	16	11.2	30	100	78	810	W28LTU1600	1U13		125	1	3.6	2.5	88	300	79	810	W125LTU360	1U13
28	1	25.7	18	30	100	78	995	W28LTU2570	1U13		125	1	5.7	4	88	300	79	995	W125LTU570	1U13
30	1	15	10.5	45	150	78	810	W30LTU1500	1U13		135	1	3.3	2.3	103	350	79	810	W135LTU330	1U13
30	1	24	16.8	45	150	78	995	W30LTU2400	1U13		135	1	5.3	3.7	103	350	79	995	W135LTU530	1U13

SINGLE OUTPUT **RACK MOUNTING MODELS**



1U SWITCHING REGULATED (to 720 watts)

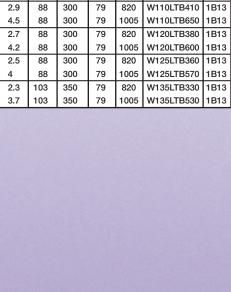
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Output voltage Ramps. at ± V (# 25 MHz BW) 40°C (# 25 MHz BW) 71°C (Fyp.) Ramps. at 71°C (# 25 MHz BW) Ramps. at 71°C (# 35 M Hz BW) Ramps. at 71°C (# 37 Mz BW) Ramps	Case
3.3 .25 70 49 15 50 61 1005 W3.3LTB7000 1B13 5 .25 40 30 15 50 64 820 W5LTB4000 1B13 6 .25 40 30 15 50 64 1005 W5LTB7000 1B13 6 .25 40 30 15 50 65 820 W6LTB4000 1B13 7 .5 66 46.2 15 50 65 820 W7LTB4000 1B13 7 .5 66 46.2 15 50 65 1005 W1TB6000 1B13 8 .5 64 44.8 30 100 67 820 W8LTB3900 1B13 9 .5 8.8 27.2 30 100 67 820 W12TB380 1B13 10 .5 37.5 26.3 30 100 68 820 W12TB3750 <td>Size</td>	Size
5 .25 40 30 15 50 64 820 W5LTB4000 1B13 6 .25 70 49 15 50 64 1005 W5LTB7000 1B13 6 .25 40 30 15 50 65 820 W6LTB4000 1B13 7 .5 66 47.6 15 50 65 1005 W1ELB600 1B13 7 .5 66 46.2 15 50 65 1005 W1ELB600 1B13 8 .5 39 28 30 100 67 820 W8LTB3900 1B13 9 .5 62 43.4 30 100 67 820 W1ETB400 1B13 9 .5 62 43.4 30 100 67 820 W1ETB400 1B13 10 .5 60 42 30 100 67 820 W1ETB400 <t< td=""><td>1B13</td></t<>	1B13
5 .25 70 49 15 50 64 1005 W5LTB7000 1B13 6 .25 40 30 15 50 65 820 W6LTB6000 1B13 6 .25 68 47.6 15 50 65 1005 W6LTB6000 1B13 7 .5 40 29 15 50 65 1005 W7LTB4000 1B13 8 .5 64 44.8 30 100 67 820 W1TB6000 1B13 9 .5 38.8 27.2 30 100 67 820 W1TB6000 1B13 10 .5 37.5 26.3 30 100 67 820 W1TB7570 1B13 12 1 37.5 26.3 30 100 73 820 W10LTB3750 1B13 12 1 66 42 30 100 73 820 W10LTB3750 <td>1B13</td>	1B13
6 25 40 30 15 50 65 820 W6LTB4000 1B13 7 5 68 47.6 15 50 65 1005 W6LTB6800 1B13 7 5 66 46.2 15 50 65 820 W7LTB4000 1B13 8 5 39 28 30 100 67 820 W8LTB6400 1B13 9 5 62 43.4 30 100 67 820 W9LTB6200 1B13 10 5 62 43.4 30 100 67 820 W10LTB600 1B13 10 5 62 43.4 30 100 67 820 W10LTB160 1B13 12 1 67.5 26.3 30 100 73 820 W10LTB160 1B13 12 1 67.5 26.3 30 1005 73 820 W12	1B13
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10 .5 60 42 30 100 68 1005 W10LTB6000 1B13 12 1 37.5 26.3 30 100 73 820 W12LTB3750 1B13 48 1 9.4 6.6 45 150 79 1005 W48LTB400 13 1 34.6 24.2 30 100 73 820 W13LTB3400 1B13 48 1 15 10.5 45 150 79 1005 W48LTB150 13 1 55.4 38.8 30 100 73 820 W13LTB540 1B13 50 1 9 6.3 44 150 79 820 W50LTB140 14 1 51.4 35.9 30 100 73 820 W14LTB5140 1B13 55 1 18.2 5.7 44 150 79 820 W55LTB130 15 1 30 21 30	1B13
12 1 37.5 26.3 30 100 73 820 W12LTB3750 1B13 12 1 60 42 30 100 73 1005 W12LTB3750 1B13 13 1 34.6 24.2 30 100 73 820 W13LTB3460 1B13 13 1 55.4 38.8 30 100 73 820 W13LTB3460 1B13 14 1 55.4 38.8 30 100 73 820 W14LTB3210 1B13 14 1 51.4 35.9 30 100 73 820 W14LTB3140 1B13 15 1 30 21 30 100 73 820 W15LTB3000 1B13 15 1 30 21 30 100 73 820 W15LTB3000 1B13 15 1 48 33.6 30 100 73 820 <td< td=""><td>1B13</td></td<>	1B13
12 1 60 42 30 100 73 1005 W12LTB6000 1B13 13 1 34.6 24.2 30 100 73 820 W13LTB3460 1B13 50 1 9 6.3 44 150 79 820 W50LTB900 13 1 55.4 38.8 30 100 73 820 W13LTB540 1B13 50 1 9 6.3 44 150 79 820 W50LTB40 14 1 51.4 35.9 30 100 73 820 W14LTB5140 1B13 55 1 14.4 10 44 150 79 820 W55LTB140 15 1 30 21 30 100 73 820 W15LTB3000 1B13 55 1 13.1 9.2 44 150 79 820 W60LTB120 15 1 30 21 30 100 <td>1B13</td>	1B13
13 1 34.6 24.2 30 100 73 820 W13LTB3460 1B13 13 1 55.4 38.8 30 100 73 1005 W13LTB3460 1B13 14 1 32.1 22.5 30 100 73 820 W14LTB3210 1B13 14 1 51.4 35.9 30 100 73 820 W14LTB3210 1B13 15 1 30 21 30 100 73 820 W15LTB3000 1B13 15 1 48 33.6 30 100 73 820 W15LTB3000 1B13 16 1 28.1 19.7 30 100 73 820 W15LTB300 1B13 60 1 7.5 5.3 44 150 79 820 W60LTB750 16 1 28.1 19.7 30 100 73 820 W16LTB2810 1B13 70 1 6.4 4.5 66 225 79	1B13
13 1 55.4 38.8 30 100 73 1005 W13LTB5540 1B13 14 1 32.1 22.5 30 100 73 820 W14LTB3210 1B13 14 1 51.4 35.9 30 100 73 820 W14LTB3210 1B13 15 1 30 21 30 100 73 820 W15LTB3000 1B13 15 1 33.6 30 100 73 820 W15LTB3000 1B13 15 1 48 33.6 30 100 73 820 W15LTB4800 1B13 16 1 28.1 19.7 30 100 73 820 W16LTB2810 1B13 60 1 75 5.3 44 150 79 820 W60LTB750 16 1 28.1 19.7 30 100 73 820 W16LTB2810 1B13 70 1 6.4 4.5 66 225 79 820 W60LTB760<	1B13
14 1 32.1 22.5 30 100 73 820 W14LTB3210 1B13 14 1 51.4 35.9 30 100 73 1005 W14LTB3140 1B13 15 1 30 21 30 100 73 820 W15LTB3000 1B13 55 1 13.1 9.2 44 150 79 820 W55LTB131 15 1 48 33.6 30 100 73 1005 W15LTB4000 1B13 60 1 7.5 5.3 44 150 79 820 W60LTB750 16 1 28.1 19.7 30 100 73 820 W16LTB210 1B13 60 1 7.5 5.3 44 150 79 820 W60LTB750 16 1 28.1 19.7 30 100 73 820 W16LTB2810 1B13 70 1 6.4 4.5	1B13
14 1 51.4 35.9 30 100 73 1005 W14LTB5140 1B13 15 1 30 21 30 100 73 820 W15LTB3000 1B13 60 1 7.5 5.3 44 150 79 820 W60LTB700 15 1 48 33.6 30 100 73 1005 W15LTB4800 1B13 60 1 7.5 5.3 44 150 79 820 W60LTB700 16 1 28.1 19.7 30 100 73 820 W16LTB2810 1B13 60 1 7.5 5.3 44 150 79 820 W60LTB700 16 1 28.1 19.7 30 100 73 820 W16LTB2810 1B13 70 1 6.4 4.5 66 225 79 820 W70LTB640	1B13 1B13
15 1 30 21 30 100 73 820 W15LTB3000 1B13 15 1 48 33.6 30 100 73 1005 W15LTB4800 1B13 60 1 7.5 5.3 44 150 79 820 W60LTB750 16 1 28.1 19.7 30 100 73 820 W16LTB2810 1B13 60 1 12 8.4 44 150 79 1005 W60LTB120 16 1 28.1 19.7 30 100 73 820 W16LTB2810 1B13 70 1 6.4 4.5 66 225 79 820 W70LTB640	1B13
15 1 48 33.6 30 100 73 1005 W15LTB4800 1B13 60 1 12 8.4 44 150 79 1005 W60LTB120 16 1 28.1 19.7 30 100 73 820 W16LTB2810 1B13 70 1 6.4 4.5 66 225 79 820 W70LTB4400	1B13
16 1 28.1 19.7 30 100 73 820 W16LTB2810 1B13 70 1 6.4 4.5 66 225 79 820 W70LTB640	1B13
	1B13
	1B13
18 1 25 17.5 30 100 75 820 W18LTB2500 1B13 75 1 6 4.2 66 225 79 820 W75LTB600	1B13
18 1 40 28 30 100 75 1005 W18LTB4000 1B13 75 1 9.6 6.7 66 225 79 1005 W75LTB960	1B13
20 1 22.5 15.8 30 100 76 820 W20LTB2250 1B13 80 1 5.6 3.9 66 225 79 820 W80LTB560	1B13
20 1 36 25.2 30 100 76 1005 W20LTB3600 1B13 80 1 9 6.3 66 225 79 1005 W80LTB900	1B13
22 1 20.5 14.4 30 100 76 820 W22LTB2050 1B13 90 1 5 3.5 66 225 79 820 W90LTB500	1B13
22 1 32.7 22.9 30 100 76 1005 W22LTB3270 1B13 90 1 8 5.6 66 225 79 1005 W90LTB800	1B13
24 1 18.8 13.2 30 100 78 820 W24LTB1880 1B13 100 1 4.5 3.2 88 300 79 820 W100LTB45	1B13
24 1 30 21 30 100 78 1005 W24LTB3000 1B13 100 1 7.2 5 88 300 79 1005 W100LTB72	1B13
25 1 18 12.6 30 100 78 820 W25LTB1800 1B13 110 1 4.1 2.9 88 300 79 820 W110LTB41	1B13
25 1 28.8 20.2 30 100 78 1005 W25LTB2880 1B13 110 1 6.5 4.5 88 300 79 1005 W110LTB68	1B13
26 1 17.3 12.1 30 100 78 820 W26LTB1730 1B13 120 1 3.8 2.7 88 300 79 820 W120LTB38	1B13
26 1 27.7 19.4 30 100 78 1005 W26LTB2770 1B13 120 1 6 4.2 88 300 79 1005 W120LTB60	1B13
28 1 16 11.2 30 100 78 820 W28LTB1600 1B13 125 1 3.6 2.5 88 300 79 820 W125LTB36	1B13
28 1 25.7 18 30 100 78 1005 W28LTB2570 1B13 125 1 5.7 4 88 300 79 1005 W125LTB57	1B13
30 1 15 10.5 45 150 78 820 W30LTB1500 1B13 135 1 3.3 2.3 103 350 79 820 W135LTB33	1B13
30 1 24 16.8 45 150 78 1005 W30LTB2400 1B13 135 1 5.3 3.7 103 350 79 1005 W135LTB53	1B13

SINGLE OUTPUT **BENCHTOP MODELS**

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WIDE ADJUST OUTPUT RACK MOUNTING MODELS

Output Voltage		Current os. at	Ripple mV (@ 25 MHz BW)		Effic. (Typ.)	(\$)		Case
Range	40°C	71°C	RMS	P-P	%*	Price	Model	Size
0-5	40	31	15	50	64	835	Y05LXU4000	1U13
0-5	70	49	15	50	64	1020	Y05LXU7000	1U13
0-8	40	28	30	100	67	835	Y08LXU4000	1U13
0-8	64	44	30	100	67	1020	Y08LXU6400	1U13
0-9	38	27	30	100	67	835	Y09LXU3800	1U13
0-9	62	43	30	100	67	1020	Y09LXU6200	1U13
0-10	37	26	30	100	68	835	Y010LXU3700	1U13
0-10	60	42	30	100	68	1020	Y010LXU6000	1U13
0-12	37	26	30	100	68	835	Y012LXU3700	1U13
0-12	60	42	30	100	68	1020	Y012LXU6000	1U13
0-14	32	22	30	100	70	835	Y014LXU3200	1U13
0-14	51	35	30	100	70	1020	Y014LXU5100	1U13
0-15	30	21	30	100	70	835	Y015LXU3000	1U13
0-15	48	34	30	100	70	1020	Y015LXU4800	1U13
0-16	28	20	30	100	70	835	Y016LXU2800	1U13
0-16	45	31	30	100	70	1020	Y016LXU4500	1U13
0-18	25	18	30	100	71	835	Y018LXU2500	1U13
0-18	40	28	30	100	71	1020	Y018LXU4000	1013
0-22	20	14	30	100	73	835	Y022LXU2000	1U13
0-22	32	22	30	100	73	1020	Y022LXU3200	1U13
0-24	18	13	30	100 100	73	835 1020	Y024LXU1800	1U13
0-24	30	21	30		73		Y024LXU3000	1013
0-25	18	13	30	100	73	835	Y025LXU1800	1013
0-25	28.8 15	20 11	30 45	100 150	73 75	1020 835	Y025LXU2880 Y030LXU1500	1U13 1U13
0-30	24	16	45 45	150	75	1020	Y030LXU2400	1013
0-35	12.8	9	45	150	75	835	Y035LXU1280	1013
0-35	20.5	9 14	45	150	75	1020	Y035LXU2050	1013
0-36	12	8	45	150	75	835	Y036LXU1200	1010
0-36	20	14	45	150	75	1020	Y036LXU2000	1013
0-40	11	8	45	150	76	835	Y040LXU1100	1013
0-40	18	12	45	150	76	1020	Y040LXU1800	1U13
0-50	9	6	45	150	76	835	Y050LXU900	1U13
0-50	15	10	45	150	76	1020	Y050LXU1500	1U13
0-60	7.5	5.3	45	150	79	835	Y060LXU750	1U13
0-60	12	8.4	45	150	79	1020	Y060LXU1200	1U13
0-70	6.4	4.5	66	225	79	835	Y070LXU640	1U13
0-70	10.3	7.2	66	225	79	1020	Y070LXU1030	1U13
0-75	6	4.2	66	225	79	835	Y075LXU600	1U13
0-75	9.6	6.7	66	225	79	1020	Y075LXU960	1U13
0-80	5.6	3.9	66	225	79	835	Y080LXU560	1U13
0-80	9	6.3	66	225	79	1020	Y080LXU900	1U13
0-90	5	3.5	66	225	79	835	Y090LXU500	1U13
0-90	8	5.6	66	225	79	1020	Y090LXU800	1U13
0-100	4.5	3.2	88	300	79	835	Y0100LXU450	1U13
0-100	7.2	5	88	300	79	1020		1U13
0-110	4.1	2.9	88	300	79	835	Y0110LXU410	1U13
0-110	6.5	4.5	88	300	79		Y0110LXU650	1U13
0-120	3.8	2.7	88	300	79	835	Y0120LXU380	1U13
0-120	6	4.2	88	300	79	1020		1U13
0-125	3.6	2.5	88	300	79	835	Y0125LXU360	1U13
0-125	5.7	4	88	300	79	1020	Y0125LXU570	1U13
0-135	3.3	2.3	103	350	79	835	Y0135LXU330	1U13
0-135	5.3	3.7	103	350	79	1020	Y0135LXU530	1U13

WIDE ADJUST OUTPUT BENCHTOP MODELS

Output Voltage		Current os. at	Ripple mV (@ 25 MHz BW)		Effic. (Typ.)	(\$)		Case
Range	40°C	71°C	RMS	P-P	%*	Price	Model	Size
0-5	40	31	15	50	64	845	Y05LXB4000	1B13
0-5	70	49	15	50	64	1030	Y05LXB7000	1B13
0-8	40	28	30	100	67	845	Y08LXB4000	1B13
0-8	64	44	30	100	67	1030	Y08LXB6400	1B13
0-9	38	27	30	100	67	845	Y09LXB3800	1B13
0-9	62	43	30	100	67	1030	Y09LXB6200	1B13
0-10	37	26	30	100	68	845	Y010LXB3700	1B13
0-10	60	42	30	100	68	1030	Y010LXB6000	1B13
0-12	37	26	30	100	68	845	Y012LXB3700	1B13
0-12	60	42	30	100	68	1030	Y012LXB6000	1B13
0-14	32	22	30	100	70	845	Y014LXB3200	1B13
0-14	51	35	30	100	70	1030	Y014LXB5100	1B13
0-15	30	21	30	100	70	845	Y015LXB3000	1B13
0-15	48	34	30	100	70	1030	Y015LXB4800	1B13
0-16	28	20	30	100	70	845	Y016LXB2800	1B13
0-16	45	31	30	100	70	1030	Y016LXB4500	1B13
0-18	25	18	30	100	71	845	Y018LXB2500	1B13
0-18	40	28	30	100	71	1030	Y018LXB4000	1B13
0-22	20	14	30	100	73	845	Y022LXB2000	1B13
0-22	32	22	30	100	73	1030	Y022LXB3200	1B13
0-24	18	13	30	100	73	845	Y024LXB1800	1B13
0-24	30	21	30	100	73	1030	Y024LXB3000	1B13
0-25	18	13	30	100	73	845	Y025LXB1800	1B13
0-25	28.8	20	30	100	73	1030	Y025LXB2880	1B13
0-30	15	11	45	150	75	845	Y030LXB1500	1B13
0-30	24	16	45	150	75	1030	Y030LXB2400	1B13
0-35	12.8	9	45	150	75	845	Y035LXB1280	1B13
0-35	20.5	14	45	150	75	1030	Y035LXB2050	1B13
0-36	12	8	45	150	75	845	Y036LXB1200	1B13
0-36	20	14	45	150	75	1030	Y036LXB2000	1B13
0-40	11	8	45	150	76	845	Y040LXB1100	1B13
0-40	18	12	45	150	76	1030	Y040LXB1800	1B13
0-50	9	6	45	150	76	845	Y050LXB900	1B13
0-50	15	10	45	150	76	1030	Y050LXB1500	1B13
0-60	7.5	5.3	45	150	79	845	Y060LXB750	1B13
0-60	12	8.4	45	150	79	1030	Y060LXB1200	1B13
0-70	6.4	4.5	66	225	79	845	Y070LXB640	1B13
0-70	10.3	7.2	66	225	79	1030	Y070LXB1030	1B13
0-75	6	4.2	66	225	79	845	Y075LXB600	1B13
0-75	9.6	6.7	66	225	79	1030	Y075LXB960	1B13
0-80	5.6	3.9	66	225	79	845	Y080LXB560	1B13
0-80	9	6.3	66	225	79	1030	Y080LXB900	1B13
0-90	5	3.5	66	225	79	845	Y090LXB500	1B13
0-90	8	5.6	66	225	79	1030	Y090LXB800	1B13
0-100	4.5	3.2	88	300	79	845	Y0100LXB450	1B13
0-100	7.2	5	88	300	79	1030	Y0100LXB720	1B13
0-110	4.1	2.9	88	300	79	845	Y0110LXB410	1B13
0-110	6.5	4.5	88	300	79	1030	Y0110LXB650	1B13
0-120	3.8	2.7	88	300	79	845	Y0120LXB380	1B13
0-120	6	4.2	88	300	79	1030	Y0120LXB600	1B13
0-125	3.6	2.5	88	300	79	845	Y0125LXB360	1B13
0-125	5.7	4	88	300	79	1030	Y0125LXB570	1B13
0-135	3.3	2.3	103	350	79	845	Y0135LXB330	1B13
			103	350	79	1030	Y0135LXB530	1B13

Nominal Output	Adjust Range		Current os. at	Ripple mV (@ 25 MHz BW)		Effic. (Typ.)	(\$)	
Voltage	±Ϋ	40°C	71°C	RMS	P-P	%	Price	Model
3.3	.5	18.5	12.9	10	50	66	275	3.3NTU1850
5	.5	18.5	12.9	10	50	69	275	5NTU1850
6	.5	15.4	10.7	10	50	70	275	6NTU1540
7	.5	15	10.5	10	50	70	275	7NTU1500
8	.5	14.7	10.3	15	100	72	275	8NTU1470
9	.5	14.4	10	15	100	72	275	9NTU1440
10	.5	14.1	9.8	15	100	73	275	10NTU1410
12	.5	13.7	9.6	15	100	75	275	12NTU1370
13	.5	12.3	8.6	15	100	75	275	13NTU1230
14	.5	11.7	8.2	15	100	75	275	14NTU1170
15	.5	11.1	7.8	15	100	75	275	15NTU1110
16	.5	10.2	7.1	15	100	75	275	16NTU1020
18	.5	9.2	6.4	15	100	77	275	18NTU920
20	.5	8.6	6	15	100	78	275	20NTU860
22	.5	8	5.6	15	100	78	275	22NTU800
24	.5	7.5	5.3	15	100	80	275	24NTU750
25	.5	7.2	5	15	100	80	275	25NTU720
26	.5	6.9	4.8	15	100	80	275	26NTU690
28	.5	6.2	4.3	15	100	80	275	28NTU620
30	.5	5.6	3.9	25	150	80	275	30NTU560
32	1	5.4	3.7	25	150	80	275	32NTU540
34	1	5.2	3.6	25	150	80	275	34NTU520
36	1	5	3.5	25	150	80	275	36NTU500
38	1	4.7	3.3	25	150	80	275	38NTU470
40	1	4.3	3	25	150	81	275	40NTU430
42	1	4.1	2.8	25	150	81	275	42NTU410
45	1	3.9	2.7	25	150	81	275	45NTU390
48	1	3.7	2.6	25	150	81	275	48NTU370
50	1	3.3	2.3	50	150	80	275	50NTU330
55	1	3	2.1	50	150	80	275	55NTU300
60	1	2.8	1.9	50	150	80	275	60NTU280
70	1	2.4	1.7	67	200	80	275	70NTU240
75	1	2.2	1.5	67	200	80	275	75NTU220
80	1	2.1	1.4	67	200	80	275	80NTU210
90	1	1.8	1.3	100	300	80	275	90NTU180
100	1	1.7	1.2	150	450	80	275	100NTU170
110	1	1.5	1.1	150	450	80	275	110NTU150
120	1	1.4	1	150	450	80	275	120NTU140
125	1	1.3	0.9	150	450	80	275	125NTU130

OPTIONAL AUXILIARY OUTPUT

AUXILIARY OUTPUT SPECIFICATIONS

Startup Time: 800 mS typical.

Regulation:

Line: ±0.05% or 5 mV, whichever is greater. **Load:** ±0.05% or 5 mV, whichever is greater.

Polarity: Output is floating and may be used in either polarity.

Drift: $\pm 0.1\%$ typical over 8 hours, after 30 minute warmup.

Temperature Coefficient: ±0.02%/°C (Typical).

Holdup Time: 16 mS minimum.

Transient Response: $300 \ \mu$ S to return to $\pm 1\%$ of output setting. Maximum of $\pm 3\%$ output excursion following a load step change from 50% to 100%.

Remote Sensing: Compensates up to 0.5 volt drop per output line, within the limits of the output voltage adjustment range.

Overload/Short Circuit Protection: Current limiting with automatic recovery.

Overvoltage Protection: Latches power supply OFF, reset by momentarily removing AC input power.

Output Inhibit: Applying between +3 and +25 Vdc to the inhibit terminal will disable the supply.

Thermal Protection: Thermostat, self-resetting.



1U SWITCHING REGULATED

How to order using model W24LTU3000E1G13HM3S-24NTU750 as an example:

<u>W24LTU3000</u> <u>E1 G13 H M3 S</u> - <u>24NTU750</u>

Standard Model Number

Choose from standard single or wide adjust outputs (see tables on pages 3 - 5 for available output ratings). Use '**U**' for rack mounting, substitute '**B**' for benchtop.

Auxiliary Output Option

Choose to add an auxiliary output (see table on page 6 for available output ratings).

Options

Choose options (see descriptions on page 2. Arrange in alphanumeric order). Note that when combining options 'G1' and 'G3' the result is 'G13'.

All options listed on page 2 apply only to the models listed on pages 3 - 5. The optional Auxiliary Output has only 'Inhibit' functionality in addition to output and sense connections.





"Whenever I need a power supply for any project, I always check Acopian first. Your customer service is first rate, and I really like the fast, dependable shipping. The reliability of your products is an additional bonus – they seem to last forever."

> - Gudrun Kleist, Engineering Associate Lawrence Berkeley National Laboratory

About Acopian's 3 Day Shipment Guarantee:

In 1964, Acopian initiated its "3 Day Shipping Guarantee." Since then our product offerings have expanded to include many more lines of power supplies that ship within 3 Days as well as others that ship within 6 or 9 Days. These guarantees apply to every model in the Acopian catalog.

Our unique 3-day shipping guarantee has prompted many questions. Below are some of those most often asked:

What does Acopian's 3-day shipping promise mean?

It means that power modules listed in this catalog are shipped within 3 days after we receive your order. High Voltage, Redundant, Rack Mounting, Systems and certain Switching power supplies are shipped within 9 days.

Has Acopian ever failed to meet this promise? Never.

Do options affect shipping time?

The 230 volt input option and moisture/fungus-proofing option require two additional days. All other options do not affect shipping time.

Is the 3-day promise affected by quantity? Suppose we need 50 or 100 pieces? The 3-day promise applies to orders for five or less modules. (Two or less for 9-day items). If requested, Acopian will ship five pieces of a larger order in 3 days and, with consideration of your requirement, schedule the balance. (Since each shipment is processed and priced as a separate order, for lowest prices request shipment in one lot.)

What if I need four or five different models? Does the 3-day promise still apply? Yes. Guaranteed 3-day shipment applies to one model or to a combination of models.

Do I have to ask for 3-day shipment of my order?

3-day shipment is automatic. In fact, you must tell us if you want the shipment delayed.

How long after you ship will I have the power supplies?

Transportation time varies with the carrier used. Unless otherwise requested, Acopian ships small orders by UPS Ground.

You say Acopian has never failed to meet the 3-day promise. How do you do it? Our facilities have been designed and equipped to meet our 3-day shipment promise. When your order is received, your power supplies are built specifically for you and shipped within three days. We do not ship from stock. (For this reason, we are unable to accept returns for credit.)

I've seen other power supply manufacturers advertise "same-day shipment." Isn't that better than 3-day shipment?

A typical vendor's "same-day shipment" advertisement can only be fulfilled if the power supplies you need are in stock. Otherwise, a four to six week delay is not unusual before inventory is replenished and your order is shipped.

Acopian's 3-day shipment promise applies to ALL 3 Day models (larger units ship within 9 Days) and is not dependent on the quantity in stock. We build each unit after the order for that unit is received. If an order is needed faster, often times we can ship in less than 3 days.

If you require shipment even earlier than our standard promise, just let us know, we can usually ship sooner. We welcome the opportunity to work with you.

ACOPIAN...

...answers your phone call with a live salesperson

No automated menus. The person who answers your call will courteously and promptly answer your questions, quote price and delivery, expedite your urgent requirements, and offer you immediate access to our engineers. Call toll free 800-523-9478.

...can customize power supplies for you

If a standard power supply does not meet all of your requirements, speak with one of our engineers. We can often modify the specifications, ratings and configuration of a supply. We can also combine several power supplies into a Multiple Output Power System with the operating features you specify (such as meters and switches) and ship it within 9 Days!

... has a 5-year warranty

This is typical: One of our customers sent us an old power supply with a note indicating that the supply had been in continuous use since 1972 (33 years!), but he had recently noticed that the output voltage was low. We found that the capacitors had dried up, replaced them and returned the supply to the customer, who thanked us and said he intends to keep using it. We focus on making power supplies that will last a long time. There are power supplies that cost less than ours, or that are smaller than ours, but you won't find any that last longer than ours. All too often, low-priced supplies are densely packed, run hot, have short lifetimes and short warranties. All Acopian metal-cased power products have a 5-year warranty, but you can expect them to last a lot longer.

Purchase Acopian... 3-day shipment, long lasting power supplies, and unsurpassed customer service.

"In my business, Acopian is referred to as bulletproof. It never fails and lasts forever."

> - Steve Andrews, President Technical Options, Inc.

"If Acopian made automobiles, I'd buy one without question."

- David A. Price, Research Technologist Georgia Tech Research Institute

ORDERING INFORMATION & Terms and Conditions

ACOPIAN SELLS FACTORY DIRECT WORLDWIDE: We do not use representatives or distributors. Contact Acopian for technical information or a quote.

WARRANTY: Acopian power supplies are warranted to be free from defects in material and workmanship for a period of five years (encapsulated devices, for one year) from date of original shipment. Acopian's obligation under this warranty is limited to repairing any power supply returned to the factory Service Department in Easton, PA and replacing any defective parts. Mini Encapsulated power supplies are not repairable. Authorization must be obtained from Acopian before a power supply may be returned for repair. Units must be well packed when shipping to Acopian; the repair of any damage incurred during shipment will be charged. Transportation charges are to be paid by the purchaser. A reinspection and handling charge will be applied to returned units found to have no defects. If a failure has been caused by misuse, operation in excess of specifications, or modification by the customer, repairs will be billed at cost; in such cases, a cost estimate will be submitted before work is started.

Acopian reserves the right to make changes or improvements in its products without incurring any obligation to install the same on products previously manufactured.

This warranty is in lieu of all other warranties, obligations, and liabilities, expressed or implied, and is the purchaser's exclusive remedy. Acopian makes no warranty, either express or implied, of merchantability, fitness for a particular purpose or otherwise. In no event shall Acopian be liable whether in contract, tort, or negligence, for special, indirect, incidental or consequential damages of any kind, including loss of business or profits, or any other losses incurred by the purchaser or any third party, the Customer's remedies being limited, at Acopian's option, to replacement, repair or credit at the price on the date of claim.

The validity, performance and construction of all terms and conditions and any sale made by Acopian shall be determined by the law of Pennsylvania, without regard to its conflict of law principles, and all parties to the transaction expressly consent to the jurisdiction of such courts and consent to the venue of the Court of Common Pleas for Northampton County, Pennsylvania.

PRICES: The prices shown are F.O.B. our factory; Easton, PA. or Melbourne, FL.. All prices and specifications are subject to change without notice. Minimum order is \$50.00.

TERMS: Net 30 days, subject to credit approval. Visa, MasterCard and American Express also accepted.

SHIPPING: Location permitting, small shipments are made by United Parcel Service, or by Parcel Post; larger shipments, by insured motor freight collect. Shipments can be made by air upon request. Risk of loss shall be F.O.B. Our Factory, even in cases where freight may be prepaid or allowed to destination by Acopian. If equipment is received in damaged condition, it is the customer's responsibility to contact the carrier and file a claim for damages.

TIME FOR DELIVERY: The time for delivery quoted by Acopian is the time required to ship from our plants. We will not be liable for delays in delivery caused by any reason beyond our control, including but not limited to acts of God, casualty, civil disturbance, labor disputes, transportation or supply difficulties, or any interruption of our facilities, and the quoted time for delivery shall be extended during the continuance of such conditions and for a reasonable time thereafter. In no event will Acopian be liable for any premium transportation, reprocurement, or similar costs incurred by the Customer as a result of conditions beyond Acopian's control resulting in Acopian's inability to deliver product in accordance with customer's requested delivery schedules.

QUANTITY DISCOUNTS: Discounts are available to quantity buyers and are dependent upon the order quantity and the manufacturing scheduling anticipated by the order, and apply only to the quantity and delivery ordered. Partial shipments are considered as separate orders for discounting purposes.

EXPORT ORDERS: A minimum export documentation charge of \$60.00 applies. (A minimum charge of \$25.00 applies on orders requiring customs forms for Canadian orders and for orders to certain U.S. territories.)

MOISTURE/FUNGUS PROOFING: Power supplies can be furnished with a moisture and fungus resistant varnish applied to interior surfaces. To order, add the suffix letter F to the model number. The additional cost is \$25.00 per output and requires two additional days. Not available on High Voltage, Mini Encapsulated, Rack Mounting, and Gold Box Switching models.

TAGGING: Maximum of 15 characters/spaces. Add \$10.00 to price.

TEST DATA: Cost, \$35.00 or 2% of order, whichever is greater.

SPECIAL MODELS/MODIFICATIONS: Cataloged models can be altered at the factory to meet special requirements. Contact the Applications Engineering Department to discuss your needs.

PARTS: The designs used in Acopian power supplies utilize standard components to the greatest practical extent. When replacements are required, the types originally used, or their equivalents, can usually be obtained most quickly from a local electronic components distributor.

Special components, such as transformers, are stocked at the factory warehouses. Contact the Applications Engineering Department for information on the parts required, referencing the model number of the power supply, the circuit designation of the component, and a description.

PURCHASE ORDER ACCEPTANCE: Orders are accepted subject to Acopian's Terms and Conditions. Any Terms and Conditions of any Purchaser's order, agreement, or understanding which are in addition to or inconsistent with Acopian's shall not be binding upon Acopian unless made in writing and accepted over the signature of an authorized officer of Acopian. Orders shall not be considered accepted until entered into production at our plant. Acopian reserves the right to refuse any order. All typographical and clerical errors are subject to correction by Acopian.

RETURNED GOODS: Acopian products are built on a per-order basis, and ordinarily no credit can be extended for their return. No goods will be accepted for return unless authorized in writing by Acopian.

CHANGES: The customer may, by a written notice, request changes within the general scope of the order, in the drawings, designs or specifications; method of shipment; and place of delivery. If any such change causes an increase or decrease in the cost, or the time required for the processing of any part of the order, an equitable adjustment shall be made in the price or delivery schedule, or both, and the order shall be modified in writing accordingly.

CANCELLATION: Suspension or cancellation of orders may be made only upon our written approval and on terms that will indemnify us against all loss.

OVERTIME: It is anticipated that any order will be processed during regular working hours on regular working days. If for any reason the Purchaser requests Acopian to process the order, or any portion of it, outside of such regular working hours, any overtime or other additional expense occasioned thereby shall be billed to and paid by the Purchaser as an extra cost. Acopian reserves the right to decline to process the order outside regular working hours.

CUSTOMER DELAY OF WORK: If the performance of all or any part of the work is delayed or interrupted by Customer's failure to act within the time specified (or within a reasonable time if no time is specified) and such act is not expressed or implied by the order, an adjustment shall be made in the cost of performance of the order caused by such delay or interruption and the order modified in writing accordingly. Adjustment will also be made in the delivery or performance dates and any other contractual provisions affected by such delay or interruption.

GOVERNMENT SPECIFICATIONS: Pricing is based upon industrial-grade construction, marking, packing, and packaging. Exception is taken to any MIL specifications, and to any requirements for the use of special forms, documentation other than quoted, and Government Source Inspection. Acopian must decline to quote on any other basis.

APPLICATIONS ASSISTANCE: Questions regarding the specifications, features, and use of any Acopian product should be directed to the Applications Engineering Department. A staff of power supply specialists will be pleased to assist you.

www.acopian.com - Online Ordering and Instant Quotes Online!

ALL ACOPIAN POWER SUPPLIES MADE IN U.S.A.

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Acopian Technical Company P.O. Box 638, Easton, PA 18044 • Phone: (610) 258-5441 • FAX: (610) 258-2842 Call toll free: (800) 523-9478 (International: Country Code 01)

Since 1957

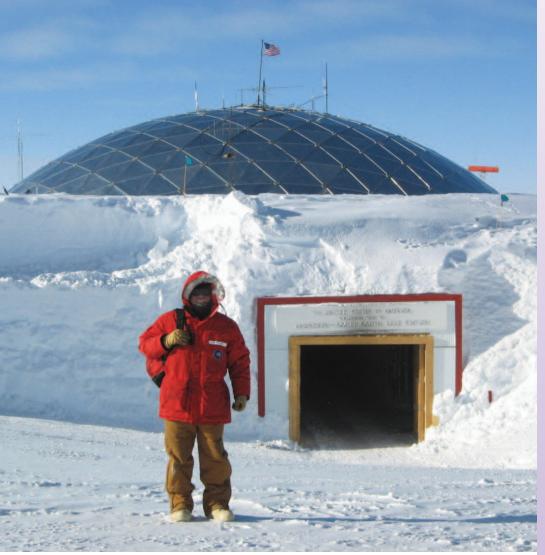


Photo courtesy of the IceCube Project

"At Project IceCube, it's absolutely critical to have a good power supply.

The ice must be as pure and clear as possible. If the power to the ice top sensor system were to fail, we would risk the tank water freezing without being controlled, resulting in bubbles and impurities, and very much reducing the quality of ice and quality of information that we can see with our detectors. We chose Acopian power supplies to power our pumping and degassing systems because of their reputation for reliability. The people at Acopian met all of our highly demanding specifications and, despite very little time until our window to ship to the Pole, they met our schedule. We were 100% satisfied."

> Jim Baccus Cable System Manager Project IceCube (the international high-energy neutrino observatory being built and installed in the ice below South Pole Station)

The world's most demanding environments demand Acopian power systems.

Design your own Acopian power system online with the System Builder at www.acopian.com. Simply enter your requirements, and you'll receive a quotation for fully wired multiple-output power systems, without the need for you to prepare mechanical layouts or search through a power supply catalog.



ALL ACOPIAN POWER SUPPLIES MADE IN U.S.A.

Each system will be completely wired, tested and shipped within 9 days after receipt of the order. Choose Acopian – the power supplies of choice for the world's leading engineers.

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