

AC-DC AND DC-DC POWER SUPPLIES



***Every power supply included in this brochure is
Shipped Within 3 Days!***



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



Power Supply Selection Guide

3-Day Shipping Promise

We've been keeping that promise for more than 40 years! 3

NEW!

www.VoltageFinder.com

Find models with almost every DC output voltage from 1V up to 30kV 7

Mini Encapsulated Power Supplies

(Models to 75 volts and 15 watts)



PC Board Mounting – Linear

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With Screw Terminals – Linear

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Acopian Promises to Ship Within Three Days

Lawrence Berkeley National Laboratory

“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



...and we keep that promise. For more than 40 years, Acopian has been shipping AC to DC power modules within three days after receipt of an order. During this period, the Acopian line has expanded from the original Plug-in modules to a broad range of different types of power supplies. Our unique 3-day shipping guarantee has prompted many questions. Below are some of those most often asked:

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.

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.

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.

Has Acopian ever failed to meet this promise?

Never.

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.)



single output

Mini Encapsulated - PC Board mounting

LINEAR REGULATED

AC-DC

- Shipped Within 3 Days
- All Models U.L. Recognized
- One Year Warranty



Conserve space with mini-modules as small as 2.3" x 1.8" x 1.0". Models with outputs ranging from 1 to 75 volts, and from 30 mA to 2.5 amps are available. All feature excellent regulation and ripple parameters, and are short circuit protected.

Rugged encapsulated construction and generously derated components assure years of reliable operation. PC Board mounting mini-modules are also available with multiple outputs - see page 6.

STANDARD FEATURES

- May be used in series
- No derating or heat sinking required
- Short circuit protected
- Small, lightweight

SPECIFICATIONS

Input Voltage: 105-125 VAC, 47 to 420 Hz, single phase.

Output Voltage Setting: Output is factory preset to within $\pm 2\%$ (1 to 9 volt models) or $\pm 1\%$ (10 to 75 volt models) of the nominal output voltage.

T/C terminal (Output Voltage Trim Adjustment): The T/C terminal can be used to trim the output more precisely to the nominal voltage rating by connecting an external resistor from the T/C terminal to either the + or - terminal.

Polarity: Output is floating. Either positive or negative terminal may be grounded.

Ambient Operating Temperature: -20 to $+71^{\circ}\text{C}$. No derating required.

Storage Temperature: -55 to $+85^{\circ}\text{C}$.

Temperature Coefficient: From 9 to 75 volts, typically $0.015\%/^{\circ}\text{C}$; 1 to 8 volts, $0.03\%/^{\circ}\text{C}$.

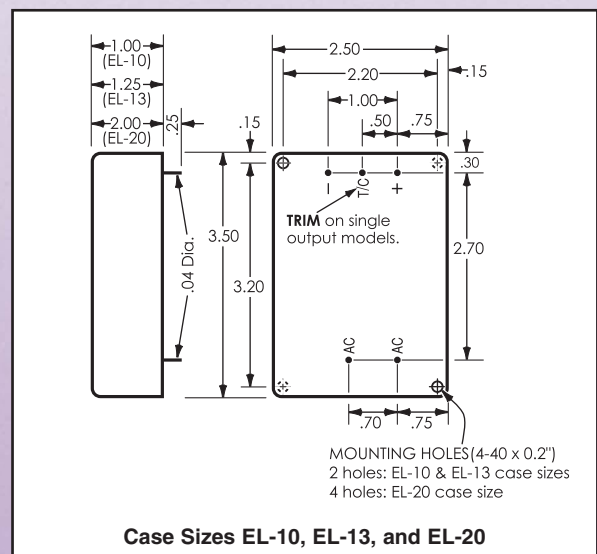
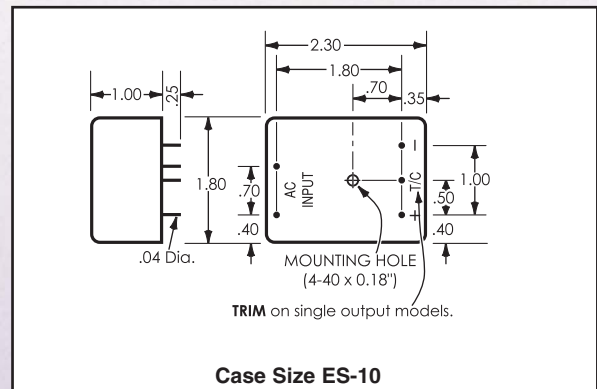
Impedance: 0.07 ohms at 1 kHz and 0.2 ohms at 10 kHz (approx.).

Weight: 7 oz. (Case size ES-10)
13 oz. (Case size EL-10)
1 lb. 3 oz. (Case size EL-13)
1 lb. 15 oz. (Case size EL-20)

Mounting: May be mounted on printed circuit board or in socket (see page 6).

OPTIONS

230 Volt Input: All models can be alternately furnished for operation on an input of 210 to 250 VAC, 47-420 Hz. To order, add suffix "-230" to model number and \$10.00 to price. Requires two additional days.



SINGLE OUTPUT, FOR PC BOARD MOUNTING

(For Mini Encapsulated power supplies with higher wattage outputs than those shown below, contact factory.)

Nominal Output Voltage	Output Current Amps.	Regulation		Ripple mV RMS	(\$) Price	Model	Case Size
		Load ±%	Line ±%				
1	.250	.1	.05	0.5	59	1E25	ES-10
1	.500	.2	.05	1	75	1E50A	EL-10
1.5	.250	.1	.05	0.5	59	1.5E25	ES-10
1.5	.500	.2	.05	1	75	1.5E50A	EL-10
1.5	1.0	.3	.05	1	98	1.5E100	EL-13
1.5	2.5	.3	.05	1	130	1.5E250	EL-20
2	.200	.1	.05	0.5	59	2E20	ES-10
2	.400	.2	.05	1	75	2E40A	EL-10
3	.250	.1	.05	0.5	59	3E25	ES-10
3	.500	.2	.05	1	75	3E50A	EL-10
3.3	.250	.05	.05	0.5	59	3.3E25	ES-10
3.3	.500	.1	.05	1	75	3.3E50A	EL-10
3.3	1.0	.3	.05	1	98	3.3E100	EL-13
3.3	2.0	.3	.05	1	115	3.3E200	EL-20
4	.200	.05	.05	0.5	59	4E20	ES-10
4	.400	.1	.05	1	75	4E40A	EL-10
5	.250	.05	.05	0.5	59	5E25	ES-10
5	.500	.1	.05	1	69	5E50A	EL-10
5	1.0	.15	.05	1	85	5E100	EL-13
5	1.5	.15	.05	1	98	5E150	EL-13
5	2.0	.15	.05	1	115	5E200	EL-20
5	2.5	.15	.05	1	130	5E250	EL-20
6	.200	.05	.05	0.5	59	6E20	ES-10
6	.400	.1	.05	1	75	6E40A	EL-10
6	.550	.2	.05	1	89	6E55	EL-10
6	1.0	.2	.05	1	105	6E100	EL-13
6	1.75	.15	.05	1	125	6E175	EL-20
7	.170	.05	.05	0.5	59	7E17	ES-10
7	.340	.1	.05	1	75	7E34A	EL-10
7	.450	.2	.05	1	89	7E45	EL-10
7	.900	.2	.05	1	105	7E90	EL-13
7	1.15	.15	.05	1	125	7E115	EL-20
8	.150	.05	.05	0.5	59	8E15	ES-10
8	.300	.1	.05	1	75	8E30A	EL-10
8	.700	.2	.05	1	105	8E70	EL-13
8	1.1	.15	.05	1	125	8E110	EL-20
9	.130	.05	.05	0.5	59	9E13	ES-10
9	.260	.1	.05	1	75	9E26A	EL-10
9	.450	.15	.05	1	89	9E45	EL-10
9	.850	.15	.05	1	105	9E85	EL-13
9	1.5	.15	.05	1	130	9E150	EL-20
10	.120	.02	.02	0.5	49	10E12	ES-10
10	.240	.05	.05	1	75	10E24A	EL-10
10	.400	.15	.05	1	89	10E40	EL-10
10	.750	.15	.05	1	105	10E75	EL-13
10	1.2	.1	.05	1	130	10E120	EL-20
11	.110	.02	.02	0.5	59	11E11	ES-10
11	.220	.05	.05	1	75	11E22A	EL-10
11	.350	.15	.05	1	89	11E35	EL-10
11	.600	.15	.05	1	105	11E60	EL-13
11	1.0	.1	.05	1	130	11E100	EL-20
12	.100	.02	.02	0.5	49	12E10	ES-10
12	.150	.05	.05	0.5	65	12E15	ES-10
12	.200	.05	.05	1	75	12E20A	EL-10
12	.400	.1	.05	1	89	12E40	EL-10
12	.700	.1	.05	1	110	12E70	EL-13
12	1.2	.15	.05	1	130	12E120	EL-20
13	.100	.02	.02	0.5	59	13E10	ES-10
13	.200	.05	.05	1	75	13E20A	EL-10
13	.350	.1	.05	1	89	13E35	EL-10
13	1.0	.1	.05	1	130	13E100	EL-20
14	.100	.02	.02	0.5	59	14E10	ES-10
14	.200	.05	.05	1	75	14E20A	EL-10
14	.300	.1	.05	1	89	14E30	EL-10
14	.500	.1	.05	1	105	14E50	EL-13
14	1.0	.1	.05	1	130	14E100	EL-20
15	.100	.02	.02	0.5	49	15E10	ES-10
15	.150	.05	.05	0.5	65	15E15	ES-10
15	.200	.05	.05	1	75	15E20A	EL-10
15	.400	.1	.05	1	89	15E40	EL-10
15	.600	.1	.05	1	105	15E60	EL-13
15	1.0	.1	.05	1	130	15E100	EL-20
16	.080	.02	.02	0.5	59	16E08	ES-10
16	.160	.05	.05	1	75	16E16A	EL-10
16	.350	.1	.05	1	95	16E35	EL-10
16	.500	.1	.05	1	110	16E50	EL-13
16	.900	.1	.05	1	130	16E90	EL-20
17	.070	.02	.02	0.5	59	17E07	ES-10
17	.140	.05	.05	1	75	17E14A	EL-10
17	.450	.1	.05	1	110	17E45	EL-13
17	.750	.1	.05	1	130	17E75	EL-20

Nominal Output Voltage	Output Current Amps.	Regulation		Ripple mV RMS	(\$) Price	Model	Case Size
		Load ±%	Line ±%				
18	.060	.02	.02	0.5	49	18E06	ES-10
18	.120	.05	.05	1	75	18E12A	EL-10
18	.270	.1	.05	1	89	18E27	EL-10
18	.400	.1	.05	1	105	18E40	EL-13
18	.550	.1	.05	1	125	18E55	EL-20
19	.060	.02	.02	0.5	59	19E06	ES-10
19	.120	.05	.05	1	75	19E12A	EL-10
19	.250	.1	.05	1	89	19E25	EL-10
19	.400	.1	.05	1	105	19E40	EL-13
19	.700	.1	.05	1	130	19E70	EL-20
20	.060	.02	.02	0.5	59	20E06	ES-10
20	.120	.05	.05	1	75	20E12A	EL-10
20	.200	.1	.05	1	89	20E20	EL-10
20	.400	.1	.05	1	105	20E40	EL-13
20	.700	.1	.05	1	130	20E70	EL-20
21	.060	.02	.02	0.5	59	21E06	ES-10
21	.120	.05	.05	1	75	21E12A	EL-10
21	.175	.1	.05	1	89	21E18	EL-10
21	.375	.1	.05	1	105	21E38	EL-13
21	.600	.1	.05	1	125	21E60	EL-20
22	.050	.02	.02	0.5	59	22E05	ES-10
22	.100	.05	.05	1	75	22E10A	EL-10
22	.150	.1	.05	1	89	22E15	EL-10
22	.300	.1	.05	1	105	22E30	EL-13
22	.500	.1	.05	1	125	22E50	EL-20
23	.050	.02	.02	0.5	59	23E05	ES-10
23	.100	.05	.05	1	75	23E10A	EL-10
23	.200	.1	.05	1	89	23E20	EL-10
23	.300	.1	.05	1	105	23E30	EL-13
23	.600	.1	.05	1	130	23E60	EL-20
24	.050	.02	.02	0.5	49	24E05	ES-10
24	.100	.05	.05	1	75	24E10A	EL-10
24	.200	.1	.05	1	89	24E20	EL-10
24	.350	.1	.05	1	110	24E35	EL-13
24	.600	.1	.05	1	130	24E60	EL-20
25	.050	.02	.02	0.5	59	25E05	ES-10
25	.100	.05	.05	1	75	25E10A	EL-10
25	.190	.1	.05	1	89	25E19	EL-10
25	.325	.1	.05	1	110	25E33	EL-13
25	.550	.1	.05	1	130	25E55	EL-20
26	.040	.02	.02	0.5	59	26E04	ES-10
26	.080	.05	.05	1	75	26E08A	EL-10
26	.170	.1	.05	1	89	26E17	EL-10
26	.300	.1	.05	1	105	26E30	EL-13
26	.450	.1	.05	1	125	26E45	EL-20
27	.040	.02	.02	0.5	59	27E04	ES-10
27	.080	.05	.05	1	75	27E08A	EL-10
27	.160	.1	.05	1	89	27E16	EL-10
27	.300	.1	.05	1	105	27E30	EL-13
27	.500	.1	.05	1	130	27E50	EL-20
28	.040	.02	.02	0.5	49	28E04	ES-10
28	.080	.05	.05	1	75	28E08A	EL-10
28	.150	.1	.05	1	89	28E15	EL-10
28	.300	.1	.05	1	110	28E30	EL-13
28	.500	.1	.05	1	130	28E50	EL-20
30	.080	.02	.02	1	79	30E08A	EL-13
32	.070	.02	.02	1	79	32E07A	EL-13
34	.060	.02	.02	1	79	34E06A	EL-13
35	.050	.02	.02	1	79	35E05A	EL-13
36	.050	.02	.02	1	79	36E05A	EL-13
38	.040	.02	.02	1	79	38E04A	EL-13
40	.030	.02	.02	1	79	40E03A	EL-13
40	.060	.02	.02	1	98	40E06A	EL-13
42	.030	.02	.02	1	79	42E03A	EL-13
44	.030	.02	.02	1	79	44E03A	EL-13
45	.030	.02	.02	1	79	45E03A	EL-13
48	.030	.02	.02	1	79	48E03A	EL-13
48	.050	.02	.02	1	98	48E05A	EL-13
50	.030	.02	.02	1	79	50E03A	EL-13
50	.050	.02	.02	1	98	50E05A	EL-13
55	.040	.02	.02	1	98	55E04A	EL-13
60	.050	.02	.02	1	98	60E05A	EL-13
65	.050	.02	.02	1	98	65E05A	EL-13
70	.040	.02	.02	1	98	70E04A	EL-13
75	.030	.02	.02	1	98	75E03A	EL-13
185	.025	Unregulated		2V	49	NX-25A	EL-10
185	.050	Unregulated		3.5V	69	NX-50	EL-13





dual output

Mini Encapsulated - PC Board mounting

LINEAR REGULATED
AC-DC



- Shipped Within 3 Days
- All Models U.L. Recognized
- One Year Warranty

These dual output mini-modules are compact and convenient sources of the voltages required to power operational amplifiers and related circuits. They may be mounted directly on printed circuit board assemblies, simplifying system layout and minimizing the connectors and wiring required.

STANDARD FEATURES

- May be used in series
- No derating or heat sinking required
- Short circuit protected

SPECIFICATIONS

Input Voltage: 105-125 VAC, 47 to 420 Hz, single phase.

Output Voltage Setting: Each output is factory preset to within $\pm 2\%$ (5 volt models) or $\pm 1\%$ (10, 12 and 15 volt models) of the nominal output voltage.

T/C terminal: The T/C terminal is the output Common.

Polarity: Positive output, common, and negative output.

Ambient Operating Temperature: -20 to $+71^\circ\text{C}$.
No derating required.

Storage Temperature: -55 to $+85^\circ\text{C}$.

Temperature Coefficient: 10, 12 and 15 volt models, typically $0.015\%/^\circ\text{C}$; 5 volt models, $0.03\%/^\circ\text{C}$.

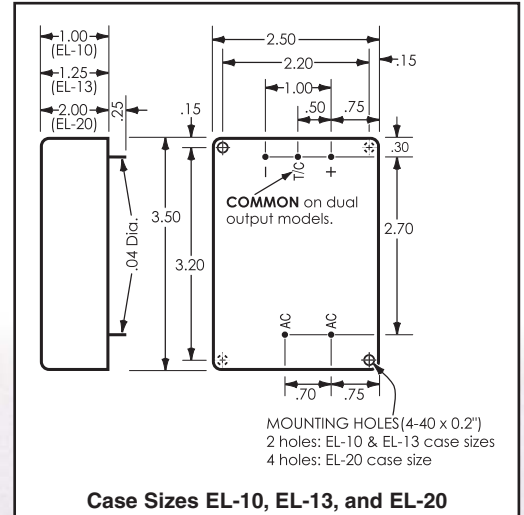
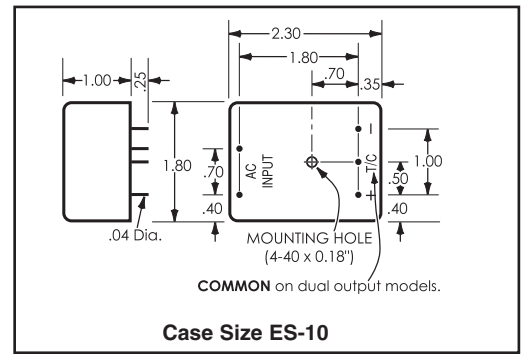
Impedance: 0.07 ohms at 1 kHz and 0.2 ohms at 10 kHz (approx.).

Weight: 7 oz. (Case size ES-10)
13 oz. (Case size EL-10)
1 lb. 3 oz. (Case size EL-13)
1 lb. 15 oz. (Case size EL-20)

Mounting: May be mounted on printed circuit board or in socket (see below).

OPTIONS

230 Volt Input: All models can be alternately furnished for operation on an input of 210 to 250 VAC, 47-420 Hz. To order, add suffix "-230" to model number and \$10.00 to price. Requires two additional days.

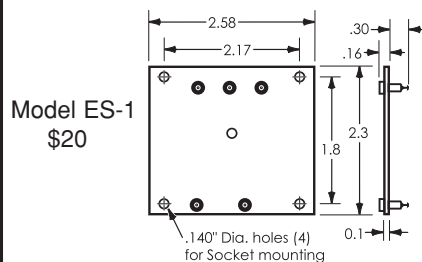


Nominal Output Voltages	Amps. per Output	Regulation		Ripple mV RMS	(\$) Price	Model	Case Size
		Load $\pm\%$	Line $\pm\%$				
± 5	.150	.1	.05	1.5	79	D5-15	EL-10
± 5	.250	.1	.05	1.5	98	D5-25	EL-10
± 5	.500	.1	.05	1.5	135	D5-50	EL-20
± 10	.200	.05	.05	1	89	D10-20	EL-10
± 10	.300	.05	.05	1	115	D10-30	EL-13
± 10	.400	.1	.05	1	135	D10-40	EL-20
± 12	.025	.1	.05	1	49	D12-03	ES-10
± 12	.050	.1	.05	1	59	D12-05	ES-10
± 12	.100	.05	.05	1	69	D12-10A	EL-10
± 12	.150	.05	.05	1	79	D12-15A	EL-10
± 12	.200	.05	.05	1	89	D12-20	EL-10
± 12	.300	.05	.05	1	105	D12-30	EL-13
± 12	.350	.05	.05	1	115	D12-35	EL-13
± 12	.500	.1	.05	1	135	D12-50	EL-20
± 15	.025	.1	.05	1	49	D15-03	ES-10
± 15	.050	.1	.05	1	59	D15-05	ES-10
± 15	.100	.05	.05	1	69	D15-10A	EL-10
± 15	.150	.05	.05	1	79	D15-15A	EL-10
± 15	.200	.05	.05	1	89	D15-20	EL-10
± 15	.300	.05	.05	1	105	D15-30	EL-13
± 15	.350	.05	.05	1	115	D15-35	EL-13
± 15	.500	.1	.05	1	135	D15-50	EL-20

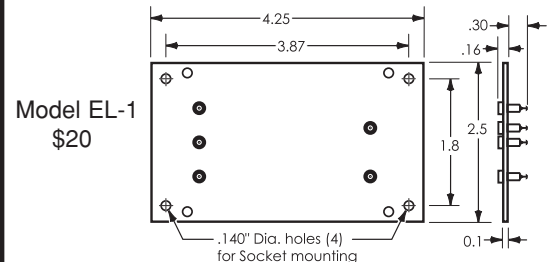
ACCESSORY SOCKETS:

For use with PC board mounting Mini Linears and PC board mounting DC-DC Converters.

Each of these sockets has a sturdy phenolic base with gold plated teflon-insulated contacts.



For case sizes ES-10 and ESC-10



For case sizes EL-10, EL-13, EL-20 and ELC-10

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a power
supply?**

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single & dual tracking outputs

Mini Encapsulated - with screw terminals

LINEAR REGULATED
AC-DC

- Shipped Within 3 Days
- All Models U.L. Recognized
- One Year Warranty



Although small in size, these mini-modules offer high performance at modest prices. All models, with series regulated outputs ranging from 1 to 75 volts and as high as 2.5 amps, may be mounted in an area only 3.5" x 2.5". Dual output models are available with the ratings

commonly required for driving op amps and other balanced loads. Terminal strip input/output connections eliminate all need for sockets or soldering. Short circuit protection, encapsulated construction, and conservative design assure long term reliability.

STANDARD FEATURES

- May be used in series
- No derating or heat sinking required
- Short circuit protected
- Small, lightweight

SPECIFICATIONS

Input Voltage: 105-125 VAC, 47 to 420 Hz, single phase.

Output Voltage Setting: Outputs are factory preset to within $\pm 2\%$ (1 to 9 volt models) or $\pm 1\%$ (10 to 75 volt models) of the nominal output voltage.

T/C terminal: For single output models, the T/C terminal can be used to trim the output more precisely to the nominal voltage rating by connecting an external resistor from the T/C terminal to either the + or - terminal. For dual output models, the T/C terminal is the output common.

Polarity: Either positive or negative terminal of a single output module may be grounded. Dual output modules have a positive/common/negative output terminal configuration.

Ambient Operating Temperature: -20 to $+71^{\circ}\text{C}$. No derating required.

Storage Temperature: -55 to $+85^{\circ}\text{C}$.

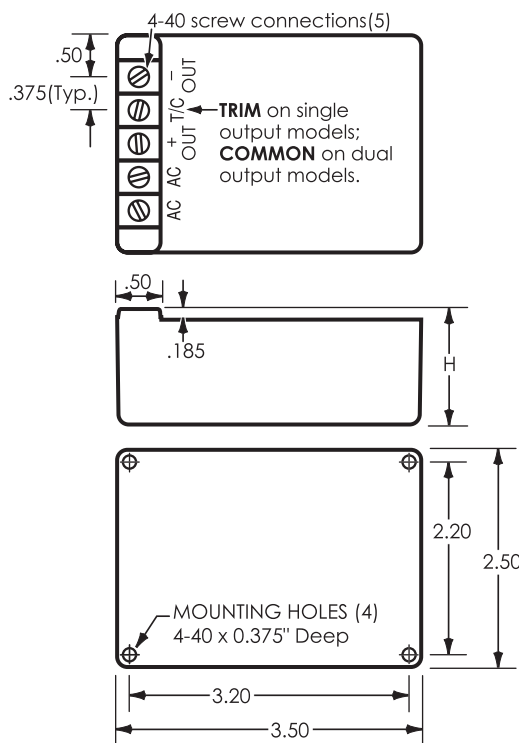
Temperature Coefficient: From 9 to 75 volts, typically $0.015\%/^{\circ}\text{C}$; 1 to 8 volts, $0.03\%/^{\circ}\text{C}$.

Impedance: 0.07 ohms at 1 kHz and 0.2 ohms at 10 kHz (approx.).

Mounting: Threaded mounting holes permit mounting to a chassis, cabinet wall or bracket, or they may be used on a test bench or tabletop. When wall-mounting or DIN rail mounting is desired, use accessory Mounting Kits on page 29.

OPTIONS

230 Volt Input: All models can be alternately furnished for operation on an input of 210 to 250 VAC, 47-420 Hz. To order, add suffix "-230" to model number and \$10.00 to price. The "-230" option requires two additional days.



Case Size	H	Approx. Weight
EB-10	1.375	15 oz.
EB-13	1.625	1 lb. 4 oz.
EB-20	2.375	2 lb. 1 oz.



SINGLE OUTPUT, WITH SCREW TERMINALS

(For Mini Encapsulated power supplies with higher wattage outputs than those shown below, contact factory.)

Nominal Output Voltage	Output Current Amps.	Regulation		Ripple mV RMS	(\$) Price	Model	Case Size
		Load ±%	Line ±%				
1	.500	.4	.05	1	79	1EB50	EB-10
1.5	.500	.3	.05	1	79	1.5EB50	EB-10
1.5	1.0	.5	.05	1	105	1.5EB100	EB-13
1.5	2.5	.6	.05	1	140	1.5EB250	EB-20
2	.400	.25	.05	1	79	2EB40	EB-10
3	.500	.25	.05	1	79	3EB50	EB-10
3.3	.500	.15	.05	1	79	3.3EB50	EB-10
3.3	1.0	.4	.05	1	105	3.3EB100	EB-13
3.3	2.0	.4	.05	1	125	3.3EB200	EB-20
4	.400	.15	.05	1	79	4EB40	EB-10
5	.500	.15	.05	1	79	5EB50	EB-10
5	1.0	.25	.05	1	95	5EB100	EB-13
5	1.5	.25	.05	1	110	5EB150	EB-13
5	2.0	.25	.05	1	125	5EB200	EB-20
5	2.5	.25	.05	1	140	5EB250	EB-20
6	.400	.1	.05	1	79	6EB40	EB-10
6	.550	.25	.05	1	95	6EB55	EB-10
6	1.0	.25	.05	1	110	6EB100	EB-13
6	1.75	.2	.05	1	130	6EB175	EB-20
7	.340	.1	.05	1	79	7EB34	EB-10
7	.450	.2	.05	1	95	7EB45	EB-10
7	.900	.25	.05	1	110	7EB90	EB-13
7	1.15	.2	.05	1	130	7EB115	EB-20
8	.300	.1	.05	1	79	8EB30	EB-10
8	.700	.2	.05	1	110	8EB70	EB-13
8	1.1	.2	.05	1	130	8EB110	EB-20
9	.260	.1	.05	1	79	9EB26	EB-10
9	.450	.15	.05	1	95	9EB45	EB-10
9	.850	.2	.05	1	110	9EB85	EB-13
9	1.5	.2	.05	1	135	9EB150	EB-20
10	.240	.05	.05	1	79	10EB24	EB-10
10	.400	.15	.05	1	95	10EB40	EB-10
10	.750	.2	.05	1	110	10EB75	EB-13
10	1.2	.15	.05	1	135	10EB120	EB-20
11	.220	.05	.05	1	79	11EB22	EB-10
11	.350	.15	.05	1	95	11EB35	EB-10
11	.600	.15	.05	1	110	11EB60	EB-13
11	1.0	.15	.05	1	135	11EB100	EB-20
12	.200	.05	.05	1	79	12EB20	EB-10
12	.400	.1	.05	1	95	12EB40	EB-10
12	.700	.15	.05	1	115	12EB70	EB-13
12	1.2	.2	.05	1	135	12EB120	EB-20
13	.200	.05	.05	1	79	13EB20	EB-10
13	.350	.1	.05	1	95	13EB35	EB-10
13	.600	.1	.05	1	115	13EB60	EB-13
13	1.0	.15	.05	1	135	13EB100	EB-20
14	.200	.05	.05	1	79	14EB20	EB-10
14	.300	.1	.05	1	95	14EB30	EB-10
14	.500	.1	.05	1	110	14EB50	EB-13
14	1.0	.15	.05	1	135	14EB100	EB-20
15	.200	.05	.05	1	79	15EB20	EB-10
15	.400	.1	.05	1	95	15EB40	EB-10
15	.600	.1	.05	1	110	15EB60	EB-13
15	1.0	.15	.05	1	135	15EB100	EB-20
16	.160	.05	.05	1	79	16EB16	EB-10
16	.350	.1	.05	1	100	16EB35	EB-10
16	.500	.1	.05	1	115	16EB50	EB-13
16	.900	.15	.05	1	135	16EB90	EB-20
17	.140	.05	.05	1	79	17EB14	EB-10
17	.325	.1	.05	1	100	17EB33	EB-10
17	.450	.1	.05	1	115	17EB45	EB-13
17	.750	.15	.05	1	135	17EB75	EB-20
18	.120	.05	.05	1	79	18EB12	EB-10
18	.270	.1	.05	1	95	18EB27	EB-10
18	.400	.1	.05	1	110	18EB40	EB-13
18	.550	.1	.05	1	130	18EB55	EB-20

Nominal Output Voltage	Output Current Amps.	Regulation		Ripple mV RMS	(\$) Price	Model	Case Size
		Load ±%	Line ±%				
19	.120	.05	.05	1	79	19EB12	EB-10
19	.250	.1	.05	1	95	19EB25	EB-10
19	.400	.1	.05	1	110	19EB40	EB-13
19	.700	.1	.05	1	135	19EB70	EB-20
20	.120	.05	.05	1	79	20EB12	EB-10
20	.200	.1	.05	1	95	20EB20	EB-10
20	.400	.1	.05	1	110	20EB40	EB-13
20	.700	.1	.05	1	135	20EB70	EB-20
21	.120	.05	.05	1	79	21EB12	EB-10
21	.175	.1	.05	1	95	21EB18	EB-10
21	.375	.1	.05	1	110	21EB38	EB-13
21	.600	.1	.05	1	130	21EB60	EB-20
22	.100	.05	.05	1	79	22EB10	EB-10
22	.150	.1	.05	1	95	22EB15	EB-10
22	.300	.1	.05	1	110	22EB30	EB-13
22	.500	.1	.05	1	130	22EB50	EB-20
23	.100	.05	.05	1	79	23EB10	EB-10
23	.200	.1	.05	1	95	23EB20	EB-10
23	.300	.1	.05	1	110	23EB30	EB-13
23	.600	.1	.05	1	135	23EB60	EB-20
24	.100	.05	.05	1	79	24EB10	EB-10
24	.200	.1	.05	1	95	24EB20	EB-10
24	.350	.1	.05	1	115	24EB35	EB-13
24	.600	.1	.05	1	135	24EB60	EB-20
25	.100	.05	.05	1	79	25EB10	EB-10
25	.190	.1	.05	1	95	25EB19	EB-10
25	.325	.1	.05	1	115	25EB33	EB-13
25	.550	.1	.05	1	135	25EB55	EB-20
26	.080	.05	.05	1	79	26EB08	EB-10
26	.170	.1	.05	1	95	26EB17	EB-10
26	.300	.1	.05	1	110	26EB30	EB-13
26	.450	.1	.05	1	130	26EB45	EB-20
27	.080	.05	.05	1	79	27EB08	EB-10
27	.160	.1	.05	1	95	27EB16	EB-10
27	.300	.1	.05	1	110	27EB30	EB-13
27	.500	.1	.05	1	135	27EB50	EB-20
28	.080	.05	.05	1	79	28EB08	EB-10
28	.150	.1	.05	1	95	28EB15	EB-10
28	.300	.1	.05	1	115	28EB30	EB-13
28	.500	.1	.05	1	135	28EB50	EB-20
30	.080	.02	.02	1	85	30EB08	EB-13
32	.070	.02	.02	1	85	32EB07	EB-13
34	.060	.02	.02	1	85	34EB06	EB-13
35	.050	.02	.02	1	85	35EB05	EB-13
36	.050	.02	.02	1	85	36EB05	EB-13
38	.040	.02	.02	1	85	38EB04	EB-13
40	.030	.02	.02	1	85	40EB03	EB-13
40	.060	.02	.02	1	105	40EB06	EB-13
42	.030	.02	.02	1	85	42EB03	EB-13
44	.030	.02	.02	1	85	44EB03	EB-13
45	.030	.02	.02	1	85	45EB03	EB-13
48	.030	.02	.02	1	85	48EB03	EB-13
48	.050	.02	.02	1	105	48EB05	EB-13
50	.030	.02	.02	1	85	50EB03	EB-13
50	.050	.02	.02	1	105	50EB05	EB-13
55	.040	.02	.02	1	105	55EB04	EB-13
60	.050	.02	.02	1	105	60EB05	EB-13
65	.050	.02	.02	1	105	65EB05	EB-13
70	.040	.02	.02	1	105	70EB04	EB-13
75	.030	.02	.02	1	105	75EB03	EB-13
185	.025	Unregulated		2V	55	NX-25B	EB-10
185	.050	Unregulated		3.5V	75	NX-50B	EB-13

DUAL TRACKING OUTPUTS

Nominal Output Voltages	Amps. per Output	Regulation		Ripple mV RMS	(\$) Price	Model	Case Size
		Load ±%	Line ±%				
±5	.150	.1	.05	1.5	85	DB5-15	EB-10
±5	.250	.1	.05	1.5	105	DB5-25	EB-10
±5	.500	.1	.05	1.5	145	DB5-50	EB-20
±10	.200	.05	.05	1	95	DB10-20	EB-10
±10	.300	.05	.05	1	125	DB10-30	EB-13
±10	.400	.1	.05	1	145	DB10-40	EB-20
±12	.100	.05	.05	1	75	DB12-10	EB-10
±12	.150	.05	.05	1	85	DB12-15	EB-10
±12	.200	.05	.05	1	95	DB12-20	EB-10

Nominal Output Voltages	Amps. per Output	Regulation		Ripple mV RMS	(\$) Price	Model	Case Size
		Load ±%	Line ±%				
±12	.300	.05	.05	1	115	DB12-30	EB-13
±12	.350	.05	.05	1	125	DB12-35	EB-13
±12	.500	.1	.05	1	145	DB12-50	EB-20
±15	.100	.05	.05	1	75	DB15-10	EB-10
±15	.150	.05	.05	1	85	DB15-15	EB-10
±15	.200	.05	.05	1	95	DB15-20	EB-10
±15	.300	.05	.05	1	115	DB15-30	EB-13
±15	.350	.05	.05	1	125	DB15-35	EB-13
±15	.500	.1	.05	1	145	DB15-50	EB-20



Narrow Profile
SINGLE OUTPUT
 LINEAR REGULATED
 AC-DC

- Shipped Within 3 Days
- All Models U.L. Recognized
- Five Year Warranty

Where only a narrow mounting space is available, Acopian Narrow Profile power supplies fit where many others cannot. Choose from Series A (High Performance) and Series B (General Purpose) models with output ratings up to 150 volts, up to 3.5 amps.



SPECIFICATIONS

Input Voltage: 105-125 VAC, 50-400 Hz, single phase.

Output Specifications: See table.

Series A: Model numbers begin with the letter A.

Series B: Model numbers begin with the letter B.

Remote Voltage Adjustment/Sensing: Standard in Series A, not available in Series B.

Polarity: Output is floating; either positive or negative terminal may be grounded or floated up to 300 volts above ground.

Temperature Coefficient:

Series A: 0.015%/°C (Typical).

Series B: 0.02%/°C (Typical).

Ambient Operating Temperature:

Series A: -20 to +71°C.

Series B: 0 to +71°C.

Storage Temperature: -55 to +85°C.

Overload/Short Circuit Protection:

Series A: Foldback current limiting with automatic recovery.

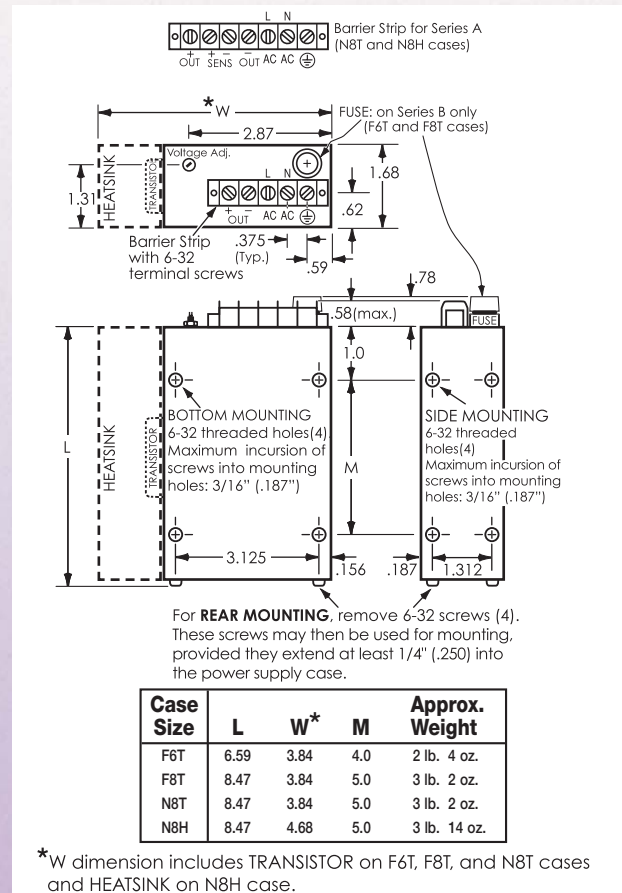
Series B: Input fuse and output current limiting.

OPTIONS

Overvoltage Protection: An internal preset overvoltage protector is available. To order, add prefix "V" to the model number and add \$25.00 to the standard price of models with outputs of 1 to 70 volts; \$35.00, for 75 to 150 volt outputs.

Terminal Strip Cover: Clips on. To order, add suffix "M" to model number and \$5.00 to price.

230 Volt Input: All models can be alternately furnished for operation on inputs of 210-250 VAC, 50-400 Hz. To order, add suffix "-230" to model number and \$25.00 to price. The "-230" option requires two additional days.



Mounting: Threaded mounting holes permit mounting to a chassis, cabinet wall or bracket, or they may be used on a test bench or tabletop. To mount from the power supply side of the mounting surface or for DIN rail mounting, see accessory Mounting Kits on page 33.

NARROW PROFILE SINGLE OUTPUT

Nominal Output Voltage	Ad-just ±V	Output Current Amps. at			Regulation		Ripple mV RMS	(\$)	Model	Case Size
		40°C	55°C	71°C	Load ± %*	Line ± %*				
1	.5	2.2	2.1	2.0	.005	.005	.250	150	A1NT220	N8T
1	.5	3.5	3.5	3.0	.005	.005	.250	180	A1NT350	N8H
1.5	.5	2.2	2.1	2.0	.005	.005	.250	150	A1.5NT220	N8T
1.5	.5	3.5	3.5	3.0	.005	.005	.250	180	A1.5NT350	N8H
2	.5	2.2	2.1	2.0	.005	.005	.250	150	A2NT220	N8T
2	.5	3.0	3.0	3.0	.005	.005	.250	180	A2NT300	N8H
3	.5	1.0	1.0	1.0	.5	.1	1	125	B3TN100	F6T
3	.5	2.2	2.1	2.0	.005	.005	.250	150	A3NT220	N8T
3	.5	3.5	3.5	3.0	.005	.005	.250	180	A3NT350	N8H
3.3	.5	1.0	1.0	1.0	.5	.1	1	125	B3.3TN100	F6T
3.3	.5	2.2	2.1	2.0	.005	.005	.250	150	A3.3NT220	N8T
3.3	.5	3.5	3.5	3.0	.005	.005	.250	180	A3.3NT350	N8H
5	.5	1.0	1.0	1.0	.1	.1	1	120	B5TN100	F6T
5	.5	1.1	1.0	1.0	.005	.005	.250	130	A5TN110	N8T
5	.5	2.2	2.1	2.0	.005	.005	.250	150	A5NT220	N8T
5	.5	3.5	3.5	3.0	.005	.005	.250	180	A5NT350	N8H
6	.5	1.0	1.0	1.0	.1	.1	1	125	B6TN100	F6T
6	.5	2.2	2.1	2.0	.005	.005	.250	150	A6NT220	N8T
6	.5	2.7	2.7	2.7	.005	.005	.250	180	A6NT270	N8H
7	1	1.0	1.0	1.0	.1	.1	1	125	B7TN100	F6T
7	.5	1.1	1.0	1.0	.005	.005	.250	145	A7TN110	N8T
7	.5	2.0	2.0	2.0	.005	.005	.250	170	A7NT200	N8H
8	1	1.0	1.0	1.0	.1	.1	1	125	B8TN100	F6T
8	.5	1.1	1.0	1.0	.005	.005	.250	145	A8TN110	N8T
8	.5	2.0	2.0	2.0	.005	.005	.250	170	A8NT200	N8H
9	1	1.0	1.0	1.0	.1	.1	1	125	B9TN100	F6T
9	.5	1.1	1.0	1.0	.005	.005	.250	145	A9TN110	N8T
9	.5	2.0	2.0	2.0	.005	.005	.250	170	A9NT200	N8H
10	1	1.0	1.0	1.0	.1	.1	1	130	B10TN100	F6T
10	.5	1.1	1.0	1.0	.005	.005	.250	145	A10TN110	N8T
10	.5	2.0	2.0	2.0	.005	.005	.250	170	A10NT200	N8H
11	1	1.0	1.0	.750	.1	.1	1	130	B11TN100	F6T
11	.5	1.1	1.0	1.0	.005	.005	.250	145	A11TN110	N8T
11	.5	2.0	2.0	2.0	.005	.005	.250	170	A11NT200	N8H
12	1	1.0	1.0	.750	.1	.1	1	130	B12TN100	F6T
12	.5	1.1	1.0	1.0	.005	.005	.250	145	A12TN110	N8T
12	.5	2.0	2.0	2.0	.005	.005	.250	170	A12NT200	N8H
13	1	1.0	1.0	.750	.1	.1	1	130	B13TN100	F6T
13	.5	1.1	1.0	1.0	.005	.005	.250	145	A13TN110	N8T
13	.5	2.0	2.0	2.0	.005	.005	.250	170	A13NT200	N8H
14	1	1.0	1.0	.750	.1	.1	1	130	B14TN100	F6T
14	.5	1.1	1.0	1.0	.005	.005	.250	145	A14TN110	N8T
14	.5	2.0	2.0	2.0	.005	.005	.250	170	A14NT200	N8H
15	1	1.0	1.0	.750	.1	.1	1	130	B15TN100	F6T
15	.5	1.1	1.0	1.0	.005	.005	.250	145	A15TN110	N8T
15	.5	2.0	2.0	2.0	.005	.005	.250	170	A15NT200	N8H
16	1	1.0	1.0	.750	.1	.1	1	130	B16TN100	F6T
16	.5	1.0	1.0	1.0	.005	.005	.250	145	A16TN100	N8T
16	.5	1.75	1.75	1.75	.005	.005	.250	170	A16NT175	N8H
18	1	.750	.750	.750	.1	.1	1	130	B18TN75	F6T
18	.5	1.0	1.0	1.0	.005	.005	.250	145	A18TN100	N8T
18	.5	1.5	1.5	1.5	.005	.005	.250	170	A18NT150	N8H
20	1	.500	.500	.500	.1	.1	1	115	B20TN50	F6T
20	.5	.900	.900	.900	.005	.005	.250	145	A20TN90	N8T
20	.5	1.25	1.25	1.25	.005	.005	.250	170	A20NT125	N8H
24	1	.750	.750	.750	.1	.1	1	130	B24TN75	F6T
24	.5	1.0	1.0	1.0	.005	.005	.250	150	A24TN100	N8T
24	.5	1.25	1.25	1.25	.005	.005	.250	175	A24NT125	N8H
25	1	.750	.750	.750	.1	.05	1	130	B25TN75	F6T
25	.5	.750	.750	.750	.005	.005	.250	150	A25TN75	N8T
25	.5	1.25	1.25	1.25	.005	.005	.250	175	A25NT125	N8H

Nominal Output Voltage	Ad-just ±V	Output Current Amps. at			Regulation		Ripple mV RMS	(\$)	Model	Case Size
		40°C	55°C	71°C	Load ± %	Line ± %				
26	1	.750	.750	.750	.1	.05	1	130	B26TN75	F6T
26	.5	1.25	1.25	1.25	.005	.005	.250	175	A26NT125	N8H
28	1	.700	.700	.700	.1	.05	1	130	B28TN70	F6T
28	.5	.800	.800	.800	.005	.005	.250	150	A28NT80	N8T
28	.5	1.25	1.25	1.25	.005	.005	.250	175	A28NT125	N8H
30	1	.500	.500	.500	.05	.05	1	130	B30TN50	F6T
30	.5	.750	.750	.750	.005	.005	.250	155	A30TN75	N8T
30	.5	1.1	1.1	1.1	.005	.005	.250	180	A30NT110	N8H
32	1	.400	.400	.400	.05	.05	1	125	B32TN40	F6T
32	.5	.600	.600	.600	.005	.005	.250	150	A32TN60	N8T
34	1	.400	.400	.400	.05	.05	1	125	B34TN40	F6T
34	.5	1.1	1.1	1.1	.005	.005	.250	180	A34NT110	N8H
35	1	.400	.400	.400	.05	.05	1	125	B35TN40	F6T
35	.5	.600	.600	.600	.005	.005	.250	150	A35TN60	N8T
35	.5	1.1	1.1	1.1	.005	.005	.250	180	A35NT110	N8H
36	1	.400	.400	.400	.05	.05	1	125	B36TN40	F6T
36	.5	.600	.600	.600	.005	.005	.250	150	A36TN60	N8T
36	.5	1.0	1.0	1.0	.005	.005	.250	180	A36NT100	N8H
38	1	.200	.200	.200	.05	.05	1	115	B38TN20	F6T
40	1	.400	.400	.400	.05	.05	1	135	B40TN40	F6T
40	.5	.750	.750	.750	.005	.005	.250	170	A40NT75	N8T
45	1	.400	.400	.400	.05	.05	1	145	B45TN40	F6T
45	.5	.600	.600	.600	.005	.005	.250	175	A45NT60	N8T
48	1	.400	.400	.400	.05	.05	1	150	B48TN40	F6T
48	.5	.500	.500	.500	.005	.005	.250	180	A48NT50	N8T
50	1	.400	.400	.400	.05	.05	1	160	B50FT40	F6T
50	1	.450	.450	.450	.005	.005	.250	185	A50NT45	N8T
55	1	.200	.200	.200	.05	.05	1	135	B55FT20	F6T
55	1	.400	.400	.400	.005	.005	.250	185	A55NT40	N8T
60	1	.150	.150	.150	.05	.05	1	135	B60FT15	F6T
60	1	.350	.350	.350	.005	.005	.250	185	A60NT35	N8T
65	1	.100	.100	.100	.05	.05	1	130	B65FT10	F6T
65	1	.250	.250	.250	.05	.05	1	165	B65FT25	F8T
65	1	.270	.270	.270	.005	.005	.250	185	A65NT27	N8T
67	1	.100	.100	.100	.05	.05	1	130	B67FT10	F6T
70	1	.100	.100	.100	.05	.05	1	130	B70FT10	F6T
70	1	.250	.250	.250	.005	.005	.250	185	A70NT25	N8T
75	1	.200	.200	.200	.05	.05	1	160	B75FT20	F8T
75	1	.250	.250	.250	.005	.005	.250	185	A75NT25	N8T
80	1	.100	.100	.100	.05	.05	1	140	B80FT10	F6T
80	1	.200	.200	.200	.05	.05	1	160	B80FT20	F8T
80	1	.250	.250	.250	.005	.005	.250	185	A80NT25	N8T
85	1	.250	.250	.250	.005	.005	.250	185	A85NT25	N8T
90	1	.100	.100	.100	.05	.05	1	145	B90FT10	F6T
90	1	.200	.200	.200	.05	.05	1	165	B90FT20	F8T
90	1	.250	.250	.250	.005	.005	.250	190	A90NT25	N8T
95	1	.200	.200	.200	.05	.05	1	170	B95FT20	F8T
95	1	.200	.200	.200	.005	.005	.250	185	A95NT20	N8T
100	1	.100	.100	.100	.05	.05	1	160	B100FT10	F6T
100	1	.200	.200	.200	.05	.05	1	175	B100FT20	F8T
100	1	.200	.200	.200	.005	.005	.250	195	A100NT20	N8T
110	1	.100	.100	.100	.05	.05	1	160	B110FT10	F6T
115	1	.100	.100	.100	.05	.05	1	160	B115FT10	F6T
120	1	.050	.050	.050	.05	.05	1	155	B120FT05	F6T
120	1	.200	.200	.200	.05	.05	1	180	B120FT20	F8T
120	1	.200	.200	.200	.005	.005	.250	195	A120NT20	N8T
125	1	.050	.050	.050	.05	.05	1	155	B125FT05	F6T
125	1	.200	.200	.200	.05	.05	1	180	B125FT20	F8T
125	1	.200	.200	.200	.005	.005	.250	195	A125NT20	N8T
150	1	.100	.100	.100	.05	.05	1	175	B150FT10	F8T
150	1	.100	.100	.100	.005	.005	.250	195	A150NT10	N8T

* or 2 mv, whichever is greater



The complete Acopian catalog is available on the Internet at www.acopian.com
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NEW!!

**Narrow Profile
SWITCHING REGULATED (to 120 watts)**

AC-DC single output
DC-DC (DC input can be used on 230 VAC input models)

- Shipped Within 3 Days
- Five Year Warranty (fans-one year)



This newest group of Narrow Profile switchers includes convection cooled models less than 7" long that provide outputs up to 75 watts and fan cooled models less than 8" long that provide outputs to 120 watts.

STANDARD FEATURES

- Internal EMI Filter and Shielding
- Pluggable Input/output Terminal Block
- Excellent Load/line Regulation
- Overcurrent, Overvoltage Protection
- No Minimum Load Required

SPECIFICATIONS

Input Voltage: 90-132 VAC, 47-420 Hz, single phase. 180-265 VAC input is also available (see Options).

DC Input: Not applicable on 115 VAC models. On 230 VAC models, 200-375 Vdc input can be used. DC input may be connected without regard to polarity.

Inrush current: Cold start, (thermistor limiter) 15A peak @115 VAC; 30A peak @ 230 VAC.

Startup Time: 1 second typical.

Input Undervoltage: An input of less than 90 VAC (180 VAC with "-230" option) will not damage power supply.

Regulation:

- Line:** ±0.05%
- Load:** ±0.05%

Output Voltage Remote Adjustment: The output voltage may be controlled by means of an external 1K potentiometer.

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

Drift: ±0.1% maximum over 8 hours, after 30 minute warmup.

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

Holdup Time: 20 mS minimum.

Transient Response: 300 µS to return to ±1% of output setting. Maximum of ±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.

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

Output Indicator (DC on): Green LED.

Efficiency: See table. (Typical, at nominal input voltage, with full load.)

Ambient Operating Temperature: 0 to +71°C.

Storage Temperature: -40 to +85°C.

Cooling: Case size WN6A: forced-air cooled; air enters rear of power supply and exits from top. Case size WN6B: convection cooled.

Switching Frequency: 100 kHz (Typical).

Dielectric Withstand Voltage	Isolation
Input to output: 4242 Vdc	500 VAC
Input to case: 2121 Vdc	500 VAC
Output to case: 750 Vdc	300 VAC

Internal Failure Protection: Provided by internal fuse.

Mounting: Threaded mounting holes permit mounting to a chassis, cabinet wall or bracket. To mount from the power supply side of the mounting surface or for DIN rail mounting, see accessory Mounting Kits on page 33.

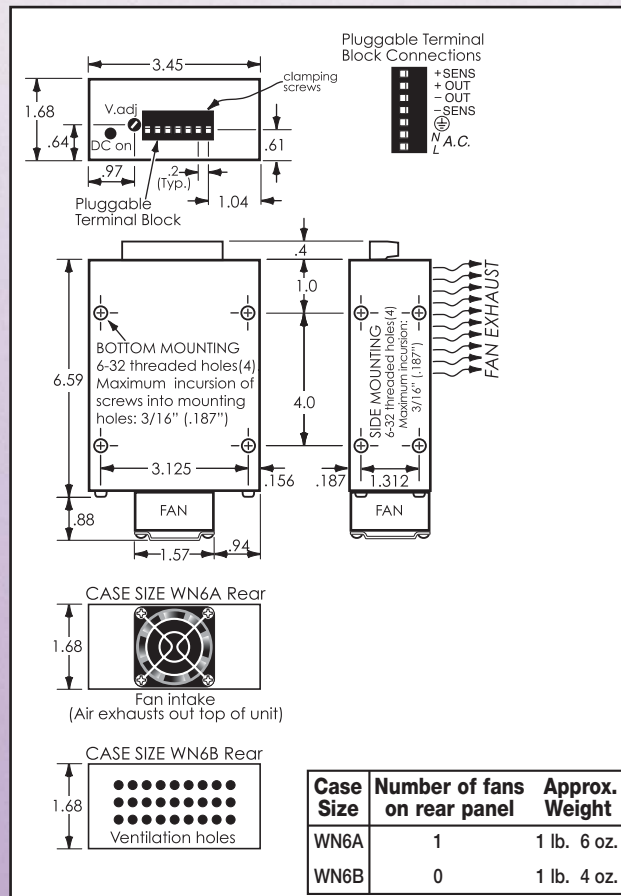
OPTIONS

230 Volt Input: For applications where operation on an input of 180-265 VAC, 47-420 Hz, is desired. To order, add suffix "-230" to the model number. No increase in price. On 230 VAC models, 200-375 Vdc input can also be used.

Narrow Profile SWITCHING REGULATED (to 120 watts)

Nominal Output Voltage	Adjust Range ±V	Output Current Amps. at		Ripple mV (@ 25 MHz BW)		Effic. (Typ.) %	(\$)	Model	Case Size
		40°C	71°C	RMS	P-P				
3.3	.5	12	8.4	10	50	66	185	W3.3FT1200	WN6B
3.3	.5	15	10.5	10	50	66	225	W3.3FT1500	WN6A
5	.5	12	8.4	10	50	70	185	W5FT1200	WN6B
5	.5	15	10.5	10	50	70	225	W5FT1500	WN6A
6	.5	10	7	10	50	71	185	W6FT1000	WN6B
6	.5	12.5	8.6	10	50	71	225	W6FT1250	WN6A
7	.5	8.5	5.9	10	50	71	185	W7FT850	WN6B
7	.5	10.6	7.4	10	50	71	225	W7FT1060	WN6A
8	.5	7.5	5.2	15	100	72	185	W8FT750	WN6B
8	.5	9.4	6.6	15	100	72	225	W8FT940	WN6A
9	.5	6.6	4.6	15	100	73	185	W9FT660	WN6B
9	.5	9.3	6.5	15	100	73	225	W9FT930	WN6A
10	.5	6	4.2	15	100	73	185	W10FT600	WN6B
10	.5	9.2	6.4	15	100	73	225	W10FT920	WN6A
12	.5	5.8	4.0	15	100	76	185	W12FT580	WN6B
12	.5	9.1	6.3	15	100	76	225	W12FT910	WN6A
13	.5	5.3	3.7	15	100	76	185	W13FT530	WN6B
13	.5	8.1	5.6	15	100	76	225	W13FT810	WN6A
14	.5	4.9	3.4	15	100	76	185	W14FT490	WN6B
14	.5	7.7	5.4	15	100	76	225	W14FT770	WN6A
15	.5	4.7	3.3	15	100	76	185	W15FT470	WN6B
15	.5	7.4	5.2	15	100	76	225	W15FT740	WN6A
16	.5	4.4	3	15	100	76	185	W16FT440	WN6B
16	.5	6.8	4.7	15	100	76	225	W16FT680	WN6A
18	.5	4	2.8	15	100	78	185	W18FT400	WN6B
18	.5	6	4.2	15	100	78	225	W18FT600	WN6A
20	.5	3.7	2.6	15	100	78	185	W20FT370	WN6B
20	.5	5.6	3.9	15	100	78	225	W20FT560	WN6A

Nominal Output Voltage	Adjust Range ±V	Output Current Amps. at		Ripple mV (@ 25 MHz BW)		Effic. (Typ.) %	(\$)	Model	Case Size
		40°C	71°C	RMS	P-P				
22	.5	3.4	2.4	15	100	79	185	W22FT340	WN6B
22	.5	5.3	3.7	15	100	79	225	W22FT530	WN6A
24	.5	3.2	2.2	15	100	81	185	W24FT320	WN6B
24	.5	5	3.5	15	100	80	225	W24FT500	WN6A
25	.5	3	2.1	15	100	81	185	W25FT300	WN6B
25	.5	4.8	3.3	15	100	80	225	W25FT480	WN6A
26	.5	2.8	2	15	100	81	185	W26FT280	WN6B
26	.5	4.6	3.2	15	100	80	225	W26FT460	WN6A
28	.5	2.7	1.9	15	100	81	185	W28FT270	WN6B
28	.5	4.2	2.9	15	100	80	225	W28FT420	WN6A
30	.5	2.5	1.7	25	150	81	185	W30FT250	WN6B
30	.5	4	2.8	25	150	80	225	W30FT400	WN6A
32	1	2.3	1.6	25	150	81	185	W32FT230	WN6B
32	1	3.7	2.5	25	150	80	225	W32FT370	WN6A
34	1	2.2	1.5	25	150	81	185	W34FT220	WN6B
34	1	3.5	2.4	25	150	80	225	W34FT350	WN6A
36	1	2.1	1.4	25	150	81	185	W36FT210	WN6B
36	1	3.3	2.3	25	150	80	225	W36FT330	WN6A
38	1	2	1.4	25	150	81	185	W38FT200	WN6B
38	1	3.1	2.2	25	150	80	225	W38FT310	WN6A
40	1	1.9	1.3	25	150	82	185	W40FT190	WN6B
40	1	3	2.1	25	150	81	225	W40FT300	WN6A
42	1	1.8	1.2	25	150	82	185	W42FT180	WN6B
42	1	2.8	1.9	25	150	81	225	W42FT280	WN6A
45	1	1.7	1.2	25	150	82	185	W45FT170	WN6B
45	1	2.6	1.8	25	150	81	225	W45FT260	WN6A
48	1	1.6	1.1	25	150	82	185	W48FT160	WN6B
48	1	2.5	1.7	25	150	81	225	W48FT250	WN6A



Narrow Profile

SWITCHING REGULATED (to 288 watts) (Power Factor Correction and Universal Input)

DC output (accepts either AC or DC input)

NEW!!
UL508 Listed models
now available

- Shipped Within 3 Days
- U.L. Recognized (3.3v to 48v models)
- UL508 Listed units available
- **CE** (3.3v to 48v models)
- Five Year Warranty (fans-one year)



Small yet providing up to 288 watts of well regulated DC, these supplies can be mounted in spaces where many others won't fit. A metal case fully encloses all

circuitry and provides EMI shielding and an AC input filter attenuates both common and differential mode noise conducted to the line.

STANDARD FEATURES

- Universal input
- Power Factor Correction
- High surge current capability
- 'Soft start' operation

SPECIFICATIONS

Input Voltage: 90-265 VAC, 49-61 Hz, single phase, or 110-350 Vdc. DC input may be connected without regard to polarity.

Inrush current: Cold start, (thermistor limiter) 20A peak @115 VAC; 40A peak @ 230 VAC.

Startup Time: 800 mS typical.

Input Undervoltage: An input of less than 90 VAC will not damage power supply.

Power Factor Correction: 0.99% at full load (Typical). Complies with EN61000-3-2.

Regulation:

Line: $\pm 0.05\%$

Load: $\pm 0.05\%$

Output Voltage Remote Adjustment: The output voltage may be controlled by means of an external 1K potentiometer.

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

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

Temperature Coefficient: $\pm 0.02\%/^{\circ}\text{C}$ (Typical).

Holdup Time: 16 mS minimum.

Transient Response: 300 μS 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.

EMI: Complies with FCC Part 15 and EN55022, Class A.

Output Indicator (DC on): Green LED.

Thermal Protection: Thermostat, self-resetting.

Efficiency: See table. (Typical, at nominal input voltage, with full load.)

Ambient Operating Temperature: 0 to $+71^{\circ}\text{C}$.

Storage Temperature: -40 to $+85^{\circ}\text{C}$.

Cooling: Forced-air cooled; air enters rear of power supply and exits from top.

Switching Frequency: 100 kHz (Typical).

Dielectric Withstand Voltage Isolation

Input to output: 4242 Vdc 500 AC

Input to case: 2121 Vdc 500 AC

Output to case: 750 Vdc 300 AC

Internal Failure Protection: provided by internal fuse.

Mounting: Threaded mounting holes permit mounting to a chassis, cabinet wall or bracket. To mount from the power supply side of the mounting surface or for DIN rail mounting, see accessory Mounting Kits on page 33.

OPTIONS

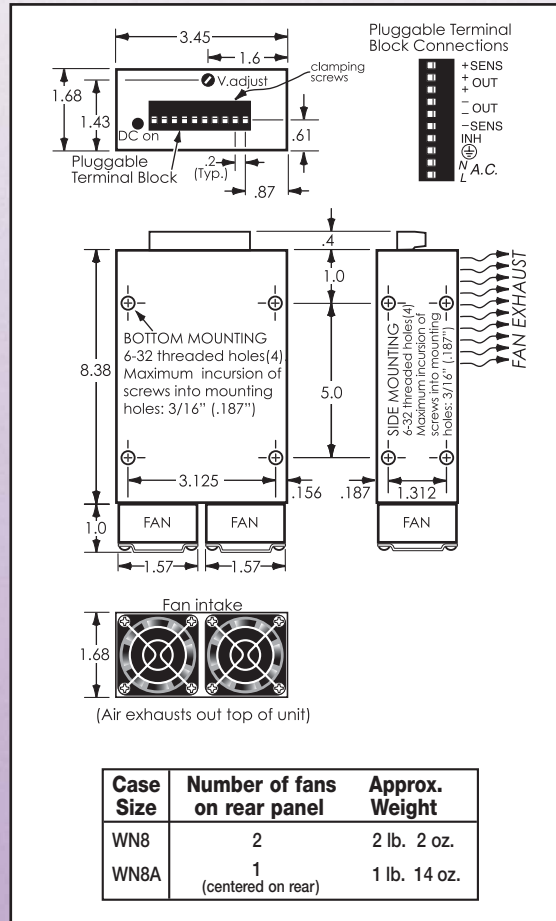
UL508 Listed (3.3v to 48v models): These power supplies have been tested for compliance with the electrical requirements of UL508, and can be marked in compliance to UL508 at no additional cost. To order, add suffix "U" to model number.

Narrow Profile SWITCHING REGULATED (to 288 watts)

Nominal Output Voltage	Adjust Range ±V	Output Current Amps. at		Ripple mV (@ 25 MHz BW)		Effic. (Typ.) %	(\$)	Model	Case Size
		40°C	71°C	RMS	P-P				
3.3	.5	18.5	12.9	10	50	66	275	W3.3NT1850	WN8A
3.3	.5	25	17.5	10	50	66	350	W3.3NT2500	WN8
5	.5	18.5	12.9	10	50	69	275	W5NT1850	WN8A
5	.5	25	17.5	10	50	69	350	W5NT2500	WN8
6	.5	15.4	10.7	10	50	70	275	W6NT1540	WN8A
6	.5	24	16.8	10	50	70	350	W6NT2400	WN8
7	.5	15	10.5	10	50	70	275	W7NT1500	WN8A
7	.5	23	16.1	10	50	70	350	W7NT2300	WN8
8	.5	14.7	10.3	15	100	72	275	W8NT1470	WN8A
8	.5	23	16.1	15	100	72	350	W8NT2300	WN8
9	.5	14.4	10	15	100	72	275	W9NT1440	WN8A
9	.5	23	16.1	15	100	72	350	W9NT2300	WN8
10	.5	14.1	9.8	15	100	73	275	W10NT1410	WN8A
10	.5	22	15.4	15	100	73	350	W10NT2200	WN8
12	.5	13.7	9.6	15	100	75	275	W12NT1370	WN8A
12	.5	22	15.4	15	100	75	350	W12NT2200	WN8
13	.5	12.3	8.6	15	100	75	275	W13NT1230	WN8A
13	.5	20	14	15	100	75	350	W13NT2000	WN8
14	.5	11.7	8.2	15	100	75	275	W14NT1170	WN8A
14	.5	19	13.3	15	100	75	350	W14NT1900	WN8
15	.5	11.1	7.8	15	100	75	275	W15NT1110	WN8A
15	.5	18	12.6	15	100	75	350	W15NT1800	WN8
16	.5	10.2	7.1	15	100	75	275	W16NT1020	WN8A
16	.5	16.5	11.5	15	100	75	350	W16NT1650	WN8
18	.5	9.2	6.4	15	100	77	275	W18NT920	WN8A
18	.5	15	10.5	15	100	77	350	W18NT1500	WN8
20	.5	8.6	6	15	100	78	275	W20NT860	WN8A
20	.5	14	9.8	15	100	78	350	W20NT1400	WN8
22	.5	8	5.6	15	100	78	275	W22NT800	WN8A
22	.5	13	9.1	15	100	78	350	W22NT1300	WN8
24	.5	7.5	5.3	15	100	80	275	W24NT750	WN8A
24	.5	12	8.4	15	100	80	350	W24NT1200	WN8
25	.5	7.2	5	15	100	80	275	W25NT720	WN8A
25	.5	11.2	7.8	15	100	80	350	W25NT1120	WN8
26	.5	6.9	4.8	15	100	80	275	W26NT690	WN8A
26	.5	10.6	7.4	15	100	80	350	W26NT1060	WN8
28	.5	6.2	4.3	15	100	80	275	W28NT620	WN8A
28	.5	10	7	15	100	80	350	W28NT1000	WN8
30	.5	5.6	3.9	25	150	80	275	W30NT560	WN8A
30	.5	9	6.3	25	150	80	350	W30NT900	WN8
32	1	5.4	3.7	25	150	80	275	W32NT540	WN8A
32	1	8.6	6	25	150	80	350	W32NT860	WN8
34	1	5.2	3.6	25	150	80	275	W34NT520	WN8A
34	1	8.3	5.8	25	150	80	350	W34NT830	WN8
36	1	5	3.5	25	150	80	275	W36NT500	WN8A
36	1	8	5.6	25	150	80	350	W36NT800	WN8
38	1	4.7	3.3	25	150	80	275	W38NT470	WN8A
38	1	7.5	5.2	25	150	80	350	W38NT750	WN8
40	1	4.3	3	25	150	81	275	W40NT430	WN8A
40	1	7	4.9	25	150	81	350	W40NT700	WN8
42	1	4.1	2.8	25	150	81	275	W42NT410	WN8A
42	1	6.8	4.7	25	150	81	350	W42NT680	WN8
45	1	3.9	2.7	25	150	81	275	W45NT390	WN8A
45	1	6.4	4.4	25	150	81	350	W45NT640	WN8
48	1	3.7	2.6	25	150	81	275	W48NT370	WN8A
48	1	6	4.2	25	150	81	350	W48NT600	WN8

Nominal Output Voltage	Adjust Range ±V	Output Current Amps. at		Ripple mV (@ 25 MHz BW)		Effic. (Typ.) %	(\$)	Model	Case Size
		40°C	71°C	RMS	P-P				
50*	1	3.3	2.3	50	150	80	275	W50NT330	WN8A
50*	1	5	3.5	50	150	80	350	W50NT500	WN8
55*	1	3	2.1	50	150	80	275	W55NT300	WN8A
55*	1	4.5	3.2	50	150	80	350	W55NT450	WN8
60*	1	2.8	1.9	50	150	80	275	W60NT280	WN8A
60*	1	4.2	2.9	50	150	80	350	W60NT420	WN8
70*	1	2.4	1.7	67	200	80	275	W70NT240	WN8A
70*	1	3.6	2.5	67	200	80	350	W70NT360	WN8
75*	1	2.2	1.5	67	200	80	275	W75NT220	WN8A
75*	1	3.3	2.3	67	200	80	350	W75NT330	WN8
80*	1	2.1	1.4	67	200	80	275	W80NT210	WN8A
80*	1	3.1	2.2	67	200	80	350	W80NT310	WN8
90*	1	1.8	1.3	100	300	80	275	W90NT180	WN8A
90*	1	2.8	1.9	100	300	80	350	W90NT280	WN8
100*	1	1.7	1.2	150	450	80	275	W100NT170	WN8A
100*	1	2.5	1.8	150	450	80	350	W100NT250	WN8
110*	1	1.5	1.1	150	450	80	275	W110NT150	WN8A
110*	1	2.3	1.6	150	450	80	350	W110NT230	WN8
120*	1	1.4	1	150	450	80	275	W120NT140	WN8A
120*	1	2.1	1.5	150	450	80	350	W120NT210	WN8
125*	1	1.3	0.9	150	450	80	275	W125NT130	WN8A
125*	1	2	1.4	150	450	80	350	W125NT200	WN8

*Not CE or U.L. recognized when this catalog was published.





Gold Box
SINGLE OUTPUT
 LINEAR REGULATED
 AC-DC

SERIES A (High Performance)

- Shipped Within 3 Days
- All Models U.L. Recognized
- **CE**
- Five Year Warranty



Series A power supplies offer unusually high performance—many models have regulation of $\pm 0.005\%$. Electronic current limiting and provision for remote voltage sensing are standard features;

overvoltage protection is available as a built-in option. Rugged extruded aluminum cases include threaded mounting holes on bottom, back, and side, permitting mounting in any position.

SERIES A: HIGH PERFORMANCE POWER SUPPLIES

STANDARD FEATURES

- Provision for remote sensing and/or external output adjustment
- Short circuit proof with automatic recovery (electronic current limiting)
- Can be mounted on any of three surfaces (case sizes H8, H11 and H16; two surfaces)

SPECIFICATIONS

Input Voltage: 105-125 VAC, 50-400 Hz, single phase.

Output Specifications: See pages 18 and 19. Series A supplies have model numbers beginning with the letter A.

Remote Voltage Adjustment/Sensing: Provision for sensing the output voltage across the load, so that drops in the load line are compensated, is a standard feature. This feature also permits the use of an externally located potentiometer to adjust output voltage.

Polarity: Output is floating; either positive or negative terminal may be grounded or floated up to 300 volts above ground.

Temperature Coefficient: 0.015%/°C (Typical).

Ambient Operating Temperature: -20 to +71°C.

Storage Temperature: -55 to +85°C.

Response Time: Less than 20 microseconds.

OPTIONS

NEW!! Under/Overvoltage Alarm Contacts: To control a horn or light, or to signal your PLC. Available on models with nominal outputs of 5 Vdc to 125 Vdc. SPDT contacts switch if the power supply's output deviates by

- 1.0 volt or more: 5 volt models.
- 2.0 volts or more: 6 to 48 volt models.
- 3.0 volts or more: 50 to 125 volt models.

Contact ratings: 120 VAC, 8A / 60 Vdc, 1A. (To comply with SELV requirements, limit switched voltage to 60Vdc/42 VAC.) To order, add suffix "L" to model number and \$35.00 to price. Models with this option are not yet UL Recognized/CE certified.

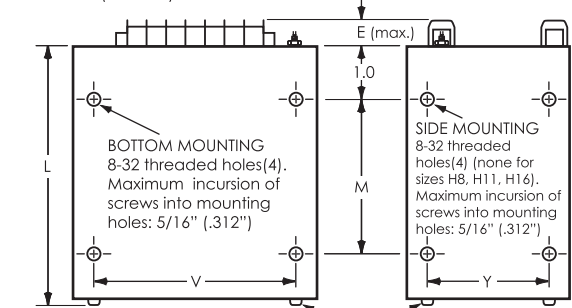
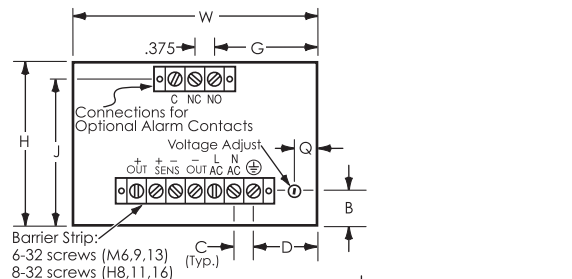
Overvoltage Protection: An internal preset overvoltage protector is available. To order, add prefix "V" to the model number, and increase standard price as follows:

Outputs of	1.5-70V	75-150V
All case sizes except H16 . . .	\$25.00	\$35.00
Case size H16	75.00	85.00

Terminal Strip Cover: Clips on. To order, add suffix "M" to model number and \$5.00 to price.

230 Volt Input: All models can be alternately furnished for operation on inputs of 210-250 VAC, 50-400 Hz. To order, add suffix "-230" to model number and \$25.00 to price. (For models in case sizes H8, H11 and H16, add \$40.00.) The "-230" option requires two additional days.

Mounting: Threaded mounting holes permit mounting to a chassis, cabinet wall or bracket. To mount from the power supply side of the mounting surface or for DIN rail mounting, see accessory Mounting Kits on page 33.



For **REAR MOUNTING**, remove original screws(4) and use 8-32 Type F self-tapping screws. They should extend at least 5/16" (0.312") into the power supply case.

Case Size	L	W	H	M	V	Y	Q	B	E	C	D	G	J	Approx. Weight
M6	6.59	5.12	3.44	4.0	4.5	3.0	.5	.75	.58	.375	1.44	2.19	3.09	4 lb. 4 oz.
M9	9.25	5.12	3.44	6.0	4.5	3.0	.5	.75	.58	.375	1.44	2.19	3.09	7 lb. 4 oz.
M13	13.25	5.12	3.44	10.0	4.5	3.0	.5	.75	.58	.375	1.44	2.19	3.09	11 lb.
H8	8.75	7.37	5.12	6.0	6.75	4.56	1.12	1.25	.78	.562	2.25	3.57	4.72	15 lb. 8 oz.
H11	11.25	7.37	5.12	8.0	6.75	4.56	1.12	1.25	.78	.562	2.25	3.57	4.72	18 lb. 4 oz.
H16	16.00	7.37	5.12	11.0	6.75	4.56	1.12	1.25	.78	.562	2.25	3.57	4.72	26 lb.



Gold Box
SINGLE OUTPUT
 LINEAR REGULATED
 AC-DC

SERIES B (General Purpose)

- Shipped Within 3 Days
- All Models U.L. Recognized
- **CE**
- Five Year Warranty

Series B power supplies are ideal for powering digital circuitry, test sets, instrument bridges, and process control transmitters. Many models have regulation of $\pm 0.1\%$ or better. All components are generously derated

to insure a long and trouble-free life, and they use the same rugged construction as the Series A line. Overvoltage protection and other options are available.

SERIES B: GENERAL PURPOSE POWER SUPPLIES

STANDARD FEATURES

- Short circuit proof (electronic current limiting)
- May be mounted on any of three surfaces
- Completely serviceable

SPECIFICATIONS

Input Voltage: 105-125 VAC, 50-400 Hz, single phase.

Output Specifications: See pages 18 and 19. Series B supplies have model numbers beginning with the letter B.

Remote Voltage Adjustment/Sensing: Available as an option. See below.

Polarity: Output is floating; either positive or negative terminal may be grounded or floated up to 300 volts above ground.

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

Ambient Operating Temperature: 0 to +71°C.

Storage Temperature: -55 to +85°C.

OPTIONS

NEW!! Under/Overvoltage Alarm Contacts: To control a horn or light, or to signal your PLC. Available on models with nominal outputs of 5 Vdc to 125 Vdc. SPDT contacts switch if the power supply's output deviates by

- 1.0 volt or more: 5 volt models.
- 2.0 volts or more: 6 to 48 volt models.
- 3.0 volts or more: 50 to 125 volt models.

Contact ratings: 120 VAC, 8A / 60 Vdc, 1A. (To comply with SELV requirements, limit switched voltage to 60Vdc/42 VAC.) To order, add suffix "L" to model number and \$35.00 to price. Models with this option are not yet UL Recognized/CE certified.

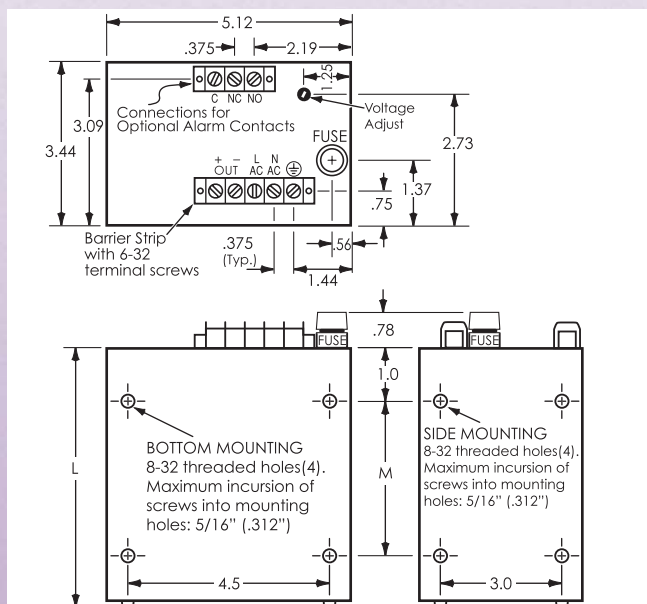
Overvoltage Protection: An internal preset overvoltage protector is available. To order, add prefix "V" to the model number, and add \$25.00 to the standard price of models with outputs of 1.5 to 70 volts; \$35.00, for 75 to 200 volt outputs.

Remote Voltage Sensing: Provision for sensing the output voltage across the load, so that drops in the load lines are compensated, is available on all models. (This option also permits the use of an externally located potentiometer to adjust output voltage.) To order, add prefix "R" to the model number. No increase in price.

Terminal Strip Cover: Clips on. To order, add suffix "M" to model number and \$5.00 to price.

230 Volt Input: All models can be alternately furnished for operation on inputs of 210-250 VAC, 50-400 Hz. To order, add suffix "-230" to model number and \$25.00 to price. The "-230" option requires two additional days.

Mounting: Threaded mounting holes permit mounting to a chassis, cabinet wall or bracket. To mount from the power supply side of the mounting surface or for DIN rail mounting, see accessory Mounting Kits on page 33.



For **REAR MOUNTING**, remove original screws(4) and use 8-32 Type F self-tapping screws. They should extend at least 5/16" (0.312") into the power supply case.

Case Size	L	M	Approx. Weight
G3	3.71	1.62	3 lb. 2 oz.
G5	5.09	3.0	4 lb. 14 oz.
G6	6.59	4.0	5 lb. 8 oz.
G9	9.25	6.0	7 lb. 4 oz.
G13	13.25	10.0	11 lb.

SERIES A & B

Nominal Output Voltage	Adj-just ±V	Output Current Amps. at			Regulation		Ripple mV RMS	(\$) Price	Model	Case Size
		40°C	55°C	71°C	Load ± %*	Line ± %*				
1.5	.5	6.0	4.3	3.5	.005	.005	.250	205	A1.5MT600	M6
1.5	.5	9.0	7.2	5.5	.005	.005	.250	235	A1.5MT900	M9
1.5	.5	12.0	10.0	8.0	.005	.005	.250	280	A1.5MT1200	M13
1.5	.5	22.0	18.5	15.5	.005	.005	.250	360	A1.5H2200	H11
1.5	.5	32.0	27.0	22.5	.005	.005	.250	440	A1.5H3200	H16
2	.5	6.0	4.3	3.5	.005	.005	.250	205	A2MT600	M6
2	.5	12.0	10.0	8.0	.005	.005	.250	280	A2MT1200	M13
3	.5	.500	.500	.500	.2	.1	1	95	B3G50	G3
3	.5	1.2	1.1	1.0	.2	.1	1	115	B3G120	G3
3	.5	2.1	2.1	2.0	.5	.1	1	135	B3G210	G5
3	.5	4.0	3.5	3.0	.5	.1	1.5	170	B3G400	G6
3	.5	6.0	4.3	3.5	.005	.005	.250	205	A3MT600	M6
3	.5	9.0	7.2	5.5	.005	.005	.250	235	A3MT900	M9
3	.5	12.0	10.0	8.0	.005	.005	.250	280	A3MT1200	M13
3	.5	17.0	14.5	12.0	.005	.005	.250	315	A3H1700	H8
3	.5	20.0	16.5	13.5	.005	.005	.250	360	A3H2000	H11
3	.5	30.0	25.0	20.0	.005	.005	.250	440	A3H3000	H16
3.3	.5	.500	.500	.500	.2	.1	1	95	B3.3G50	G3
3.3	.5	1.2	1.1	1.0	.2	.1	1	115	B3.3G120	G3
3.3	.5	2.1	2.1	2.0	.5	.1	1	135	B3.3G210	G5
3.3	.5	4.0	3.5	3.0	.5	.1	1.5	170	B3.3G400	G6
3.3	.5	6.0	4.3	3.5	.005	.005	.250	205	A3.3MT600	M6
3.3	.5	7.0	5.9	4.9	.5	.1	1.5	210	B3.3G700	G9
3.3	.5	9.0	7.2	5.5	.005	.005	.250	240	A3.3MT900	M9
3.3	.5	12.0	10.0	8.0	.005	.005	.250	280	A3.3MT1200	M13
3.3	.5	17.0	14.5	12.0	.005	.005	.250	315	A3.3H1700	H8
3.3	.5	22.0	18.5	15.5	.005	.005	.250	360	A3.3H2200	H11
3.3	.5	32.0	27.0	22.5	.005	.005	.250	440	A3.3H3200	H16
5	.5	.500	.500	.500	.1	.1	1	95	B5G50	G3
5	.5	1.2	1.1	1.0	.1	.1	1	115	B5G120	G3
5	.5	1.7	1.5	1.3	.2	.1	1.5	125	B5G170	G3
5	.5	2.1	2.1	2.0	.2	.1	1.5	135	B5G210	G5
5	.5	4.0	3.5	3.0	.3	.1	1.5	160	B5G400	G6
5	.5	5.0	4.4	3.0	.4	.1	1.5	175	B5G500	G6
5	.5	5.1	3.6	2.6	.005	.005	.250	190	A5MT510	M6
5	.5	6.0	4.3	3.5	.005	.005	.250	210	A5MT600	M6
5	.5	8.0	7.0	5.0	.4	.1	1.5	215	B5G800	G9
5	.5	9.0	7.2	5.5	.005	.005	.250	240	A5MT900	M9
5	.5	10.0	9.0	7.0	.4	.1	1.5	245	B5G1000	G13
5	.5	12.0	10.0	8.0	.005	.005	.250	280	A5MT1200	M13
5	.5	17.0	14.5	12.0	.005	.005	.250	315	A5H1700	H8
5	.5	22.0	18.5	15.0	.005	.005	.250	360	A5H2200	H11
5	.5	32.0	27.0	22.0	.005	.005	.250	440	A5H3200	H16
6	1	.500	.500	.500	.1	.1	1	95	B6G50	G3
6	.5	1.2	1.1	1.0	.1	.1	1	115	B6G120	G3
6	.5	1.7	1.5	1.3	.2	.1	1.5	125	B6G170	G3
6	.5	3.2	3.1	3.0	.3	.1	1.5	155	B6G320	G6
6	.5	4.9	3.5	2.5	.005	.005	.250	175	A6MT490	M6
6	.5	6.0	4.5	3.5	.005	.005	.250	200	A6MT600	M6
6	.5	8.5	7.5	5.2	.005	.005	.250	240	A6MT850	M9
6	.5	11.0	9.3	7.5	.005	.005	.250	280	A6MT1100	M13
6	.5	16.0	13.6	11.2	.005	.005	.250	320	A6H1600	H8
6	.5	21.0	17.0	14.0	.005	.005	.250	365	A6H2100	H11
6	.5	28.0	23.0	19.0	.005	.005	.250	440	A6H2800	H16
7	1	.500	.500	.500	.1	.05	1	100	B7G50	G3
7	1	1.0	1.0	1.0	.1	.1	1	125	B7G100	G3
7	.5	2.0	2.0	2.0	.2	.1	1.5	145	B7G200	G5
7	.5	3.0	2.7	2.5	.3	.1	1.5	165	B7G300	G6
7	.5	5.0	4.0	3.0	.005	.005	.250	200	A7MT500	M6
7	.5	6.5	5.2	4.0	.4	.1	1.0	210	B7G650	G9
7	.5	8.0	6.5	5.0	.005	.005	.250	245	A7MT800	M9
7	.5	10.0	8.0	7.0	.4	.1	1.5	255	B7G1000	G13
7	.5	10.0	8.8	7.0	.005	.005	.250	280	A7MT1000	M13
8	1	.500	.500	.500	.1	.05	1	100	B8G50	G3
8	1	1.0	1.0	1.0	.1	.1	1	125	B8G100	G3
8	.5	2.0	2.0	2.0	.2	.1	1.5	145	B8G200	G5
8	.5	3.0	2.7	2.5	.2	.1	1.5	165	B8G300	G6
8	.5	5.0	4.0	3.5	.005	.005	.250	200	A8MT500	M6
8	.5	6.5	5.2	4.0	.3	.1	1.5	220	B8G650	G9
8	.5	8.0	6.5	5.0	.005	.005	.250	245	A8MT800	M9
8	.5	10.0	8.0	7.0	.4	.1	1.5	255	B8G1000	G13
8	.5	10.5	8.8	7.0	.005	.005	.250	280	A8MT1050	M13
8	.5	20.0	16.8	13.5	.005	.005	.250	385	A8H2000	H11
8	.5	28.0	23.0	19.0	.005	.005	.250	440	A8H2800	H16
9	1	.500	.500	.500	.1	.05	1	100	B9G50	G3
9	1	1.0	1.0	1.0	.1	.1	1	125	B9G100	G3
9	.5	2.0	2.0	2.0	.2	.1	1.5	145	B9G200	G5
9	.5	3.0	2.7	2.5	.2	.1	1.5	165	B9G300	G6
9	.5	5.0	4.0	3.5	.005	.005	.250	200	A9MT500	M6
9	.5	6.5	5.2	4.0	.3	.1	1.5	220	B9G650	G9
9	.5	10.0	8.3	7.0	.005	.005	.250	280	A9MT1000	M13

*or 2 mv, whichever is greater

Nominal Output Voltage	Adj-just ±V	Output Current Amps. at			Regulation		Ripple mV RMS	(\$) Price	Model	Case Size
		40°C	55°C	71°C	Load ± %*	Line ± %*				
10	1	.500	.500	.500	.1	.05	1	95	B10G50	G3
10	1	1.0	1.0	1.0	.1	.1	1	115	B10G100	G3
10	.5	2.0	2.0	2.0	.2	.1	1.5	145	B10G200	G5
10	.5	3.0	2.7	2.5	.2	.1	1.5	165	B10G300	G6
10	.5	4.5	3.6	2.7	.005	.005	.250	200	A10MT450	M6
10	.5	6.0	5.0	4.0	.3	.1	1.5	220	B10G600	G9
10	.5	7.5	6.0	4.5	.005	.005	.250	250	A10MT750	M9
10	.5	10.0	8.3	7.0	.4	.1	1.5	255	B10G1000	G13
10	.5	10.0	8.3	7.0	.005	.005	.250	280	A10MT1000	M13
10	.5	14.0	11.9	9.8	.005	.005	.250	335	A10H1400	H8
10	.5	18.0	15.0	12.0	.005	.005	.250	385	A10H1800	H11
10	.5	25.0	20.0	16.5	.005	.005	.250	440	A10H2500	H16
12	1	.500	.500	.500	.1	.05	1	95	B12G50	G3
12	1	1.0	1.0	1.0	.1	.1	1	115	B12G100	G3
12	.5	2.0	1.7	1.5	.2	.1	1.5	140	B12G200	G5
12	.5	3.0	2.7	2.5	.2	.1	1.5	160	B12G300	G6
12	.5	3.8	3.3	2.6	.2	.1	1.5	170	B12G380	G6
12	.5	4.0	3.3	2.6	.005	.005	.250	195	A12MT400	M6
12	.5	6.5	5.3	4.0	.3	.1	1.5	220	B12G650	G9
12	.5	6.5	5.3	4.0	.005	.005	.250	245	A12MT650	M9
12	.5	9.0	7.5	6.0	.4	.1	1.5	255	B12G900	G13
12	.5	9.0	7.5	6.0	.005	.005	.250	280	A12MT900	M13
12	.5	13.0	11.0	9.1	.005	.005	.250	335	A12H1300	H8
12	.5	17.0	14.3	11.5	.005	.005	.250	385	A12H1700	H11
12	.5	21.0	17.5	14.5	.005	.005	.250	440	A12H2100	H16
13	1	.500	.500	.500	.1	.05	1	105	B13G50	G3
13	1	1.5	1.4	1.3	.1	.1	1.5	140	B13G150	G3
13	.5	2.0	2.0	2.0	.2	.1	1.5	155	B13G200	G5
13	.5	3.0	2.7	2.5	.2	.1	1.5	175	B13G300	G6
13	.5	3.5	3.0	2.5	.005	.005	.250	200	A13MT350	M6
13	.5	5.0	4.5	4.0	.2	.1	1.5	215	B13G500	G9
13	.5	8.0	7.5	7.0	.3	.1	1.5	255	B13G800	G13
13	.5	8.0	7.5	7.0	.005	.005	.250	280	A13MT800	M13
14	1	.500	.500	.500	.1	.05	1	105	B14G50	G3
14	1	1.5	1.4	1.3	.1	.1	1.5	140	B14G150	G3
14	.5	2.0	2.0	2.0	.2	.1	1.5	155	B14G200	G5
14	.5	3.0	2.7	2.5	.2	.1	1.5	175	B14G300	G6
14	.5	3.0	2.7	2.5	.005	.005	.250	195	A14MT300	M6
14	.5	5.0	4.5	4.0	.2	.1	1.5	210	B14G500	G9
14	.5	7.0	6.5	6.0	.3	.1	1.5	255	B14G700	G13
14	.5	8.0	7.5	7.0	.005	.005	.250	280	A14MT800	M13
15	1	.750	.750	.750	.1	.1	1	110	B15G75	G3
15	1	1.0	1.0	1.0	.1	.1	1	115	B15G100	G3
15	1	1.5	1.4	1.3	.1	.1	1.5	130	B15G150	G3
15	.5	2.0	1.7	1.5	.1	.1	1.5	145	B15G200	G5
15	.5	3.0	2.8	2.5	.1	.1	1.5	165	B15G300	G6
15	.5	3.0	2.8	2.5	.005	.005	.250	180	A15MT300	M6
15	.5	4.2	3.8	3.0	.15	.1	1.5	195	B15G420	G9
15	.5	5.5	4.7	4.0	.005	.005	.250	245	A15MT550	M9
15	.5	6.0	5.0	4.0	.2	.1	1.5	235	B15G600	G9
15	.5	7.0	6.0	5.0	.2	.1	1.5	255	B15G700	G13
15	.5	8.0	6.5	5.5	.005	.005	.250	280	A15MT800	M13
15	.5	11.5	9.7	8.0	.005					

SERIES A & B

Nominal Output Voltage	Adj-just ±V	Output Current Amps. at			Regulation		Ripple mV RMS	Price (\$)	Model	Case Size
		40°C	55°C	71°C	Load ± %	Line ± %				
24	1	.300	.300	.300	.05	.05	1	80	B24G30	G3
24	1	.750	.750	.750	.1	.05	1	115	B24G75	G3
24	1	1.1	1.1	1.0	.1	.1	1.5	130	B24G110	G5
24	.5	1.7	1.7	1.5	.1	.1	1.5	145	B24G170	G5
24	.5	2.1	2.0	2.0	.1	.1	1.5	160	B24G210	G5
24	.5	2.1	2.0	2.0	.005	.005	.250	185	A24MT210	M6
24	.5	3.5	3.0	2.5	.15	.1	1.5	205	B24G350	G9
24	.5	3.5	3.0	2.5	.005	.005	.250	245	A24MT350	M9
24	.5	5.0	5.0	5.0	.15	.1	1.5	255	B24G500	G13
24	.5	5.5	5.0	4.5	.005	.005	.250	280	A24MT550	M13
24	.5	8.5	7.2	5.9	.005	.005	.250	335	A24H850	H8
24	.5	12.0	10.5	9.0	.005	.005	.250	385	A24H1200	H11
24	.5	15.0	13.0	11.0	.005	.005	.250	440	A24H1500	H16
25	1	.300	.300	.300	.05	.05	1	100	B25G30	G3
25	1	.750	.750	.750	.1	.05	1	120	B25G75	G3
25	1	1.1	1.1	1.1	.1	.1	1.5	140	B25G110	G5
25	.5	1.7	1.7	1.5	.1	.1	1.5	165	B25G170	G5
25	.5	2.1	2.1	2.0	.1	.1	1.5	170	B25G210	G5
25	.5	3.5	3.0	2.5	.15	.1	1.5	210	B25G350	G9
25	.5	5.0	5.0	5.0	.15	.1	1.5	265	B25G500	G13
28	1	.300	.300	.300	.05	.05	1	110	B28G30	G3
28	1	.500	.500	.500	.05	.05	1	110	B28G50	G3
28	1	.800	.800	.800	.1	.05	1	120	B28G80	G5
28	1	1.1	1.1	1.0	.1	.05	1	135	B28G110	G5
28	.5	1.8	1.6	1.5	.1	.1	1.5	160	B28G180	G5
28	.5	2.1	2.1	2.0	.1	.1	1.5	170	B28G210	G5
28	.5	2.1	2.1	2.0	.005	.005	.250	190	A28MT210	M6
28	.5	3.0	2.7	2.5	.15	.1	1.5	200	B28G300	G9
28	.5	3.0	2.7	2.5	.005	.005	.250	225	A28MT300	M9
28	.5	5.0	5.0	5.0	.15	.1	1.5	255	B28G500	G13
28	.5	5.0	5.0	5.0	.005	.005	.250	280	A28MT500	M13
28	.5	8.0	6.8	5.6	.005	.005	.250	335	A28H800	H8
28	.5	11.0	9.5	8.0	.005	.005	.250	385	A28H1100	H11
28	.5	14.0	12.0	10.0	.005	.005	.250	440	A28H1400	H16
30	1	.300	.300	.300	.05	.05	1	100	B30GT30	G3
30	1	.500	.500	.500	.05	.05	1	115	B30GT50	G3
30	1	1.1	1.1	1.0	.1	.1	1	145	B30GT110	G5
30	.5	1.7	1.6	1.5	.1	.1	1.5	160	B30GT170	G5
30	.5	2.1	2.1	2.0	.1	.1	1.5	175	B30G210	G6
30	.5	2.1	2.1	2.0	.005	.005	.250	195	A30MT210	M6
30	.5	3.0	2.7	2.5	.005	.005	.250	230	A30MT300	M9
30	.5	5.0	5.0	5.0	.15	.1	1.5	260	B30GT500	G13
30	.5	5.0	5.0	5.0	.005	.005	.250	280	A30MT500	M13
30	.5	7.5	6.3	5.2	.005	.005	.250	340	A30H750	H8
30	.5	10.0	9.0	8.0	.005	.005	.250	395	A30H1000	H11
30	.5	14.0	12.0	10.0	.005	.005	.250	455	A30H1400	H16
32	1	.300	.300	.300	.05	.05	1	100	B32GT30	G3
32	1	.500	.500	.500	.05	.05	1	115	B32GT50	G3
32	1	1.0	1.0	1.0	.1	.1	1	145	B32GT100	G5
32	1	1.5	1.5	1.5	.1	.1	1.5	170	B32GT150	G5
32	.5	1.8	1.6	1.3	.005	.005	.250	205	A32MT180	M6
32	.5	2.5	2.1	1.7	.005	.005	.250	245	A32MT250	M9
32	.5	9.0	7.5	6.0	.005	.005	.250	410	A32HT900	H11
34	1	.300	.300	.300	.05	.05	1	100	B34GT30	G3
34	1	.800	.800	.800	.1	.1	1	145	B34GT80	G5
34	1	1.5	1.5	1.5	.1	.1	1.5	175	B34GT150	G5
35	1	.100	.100	.100	.05	.05	1	90	B35GT10	G3
35	1	.300	.300	.300	.05	.05	1	100	B35GT30	G3
35	1	.500	.500	.500	.05	.05	1	120	B35GT50	G3
35	1	.600	.600	.600	.1	.05	1	135	B35GT60	G3
35	1	.800	.800	.800	.1	.1	1.5	145	B35GT80	G5
36	1	.100	.100	.100	.05	.05	1	90	B36GT10	G3
36	1	.500	.500	.500	.05	.05	1	120	B36GT50	G3
36	1	.800	.750	.700	.1	.05	1	145	B36GT80	G5
36	.5	1.3	1.3	1.3	.1	.1	1.5	160	B36GT130	G6
36	.5	1.3	1.3	1.3	.005	.005	.250	200	A36MT130	M6
36	.5	2.3	2.0	1.8	.1	.1	1.5	225	B36GT230	G9
36	.5	2.3	2.0	1.8	.005	.005	.250	245	A36MT230	M9
36	.5	4.0	3.2	2.5	.005	.005	.250	290	A36MT400	M13
36	.5	8.0	6.6	5.3	.005	.005	.250	410	A36HT800	H11
36	.5	11.0	9.1	7.2	.005	.005	.250	510	A36HT1100	H16
40	1	.200	.200	.200	.05	.05	1	105	B40GT20	G3
40	1	.400	.400	.400	.05	.05	1	130	B40GT40	G3
40	1	.500	.500	.500	.1	.05	1	145	B40GT50	G5
40	1	1.0	1.0	1.0	.1	.1	1.5	165	B40GT100	G6
45	1	.200	.200	.200	.05	.05	1	105	B45GT20	G3
45	1	.400	.400	.400	.05	.05	1	140	B45GT40	G3

Nominal Output Voltage	Adj-just ±V	Output Current Amps. at			Regulation		Ripple mV RMS	Price (\$)	Model	Case Size
		40°C	55°C	71°C	Load ± %	Line ± %				
48	1	.200	.200	.200	.05	.05	1	105	B48GT20	G3
48	1	.400	.400	.400	.05	.05	1	145	B48GT40	G3
48	1	.600	.600	.600	.1	.1	1	175	B48GT60	G5
48	1	1.1	1.0	.600	.1	.1	1.5	190	B48GT110	G6
48	1	1.2	1.0	.800	.005	.005	.250	215	A48MT120	M6
48	1	1.8	1.6	1.2	.005	.005	.250	250	A48MT180	M9
48	1	3.0	2.6	2.1	.005	.005	.250	290	A48MT300	M13
48	1	6.0	5.0	4.0	.005	.005	.250	410	A48HT600	H11
48	1	8.5	7.2	5.5	.005	.005	.250	510	A48HT850	H16
50	1	.400	.400	.400	.05	.05	1	155	B50GT40	G3
50	1	.500	.500	.500	.05	.05	1	180	B50GT50	G5
50	1	1.0	.800	.700	.005	.005	.250	225	A50MT100	M6
50	1	1.5	1.3	1.0	.005	.005	.250	265	A50MT150	M9
50	1	2.7	2.3	1.8	.005	.005	.250	305	A50MT270	M13
50	1	6.0	5.0	4.0	.005	.005	.250	420	A50HT600	H11
50	1	8.0	6.6	5.2	.005	.005	.250	510	A50HT800	H16
55	1	.500	.500	.500	.05	.05	1	185	B55GT50	G5
60	1	.200	.200	.200	.05	.05	1	130	B60GT20	G3
60	1	.300	.300	.300	.05	.05	1	160	B60GT30	G3
60	1	.400	.400	.400	.05	.05	1	185	B60GT40	G5
60	1	.850	.720	.600	.005	.005	.250	230	A60MT85	M6
60	1	1.2	1.0	.800	.005	.005	.250	265	A60MT120	M9
60	1	2.5	2.1	1.7	.005	.005	.250	305	A60MT250	M13
60	1	5.0	4.1	3.3	.005	.005	.250	425	A60HT500	H11
60	1	7.0	5.8	4.6	.005	.005	.250	515	A60HT700	H16
65	1	.300	.300	.300	.05	.05	1	160	B65GT30	G3
70	1	.100	.100	.100	.05	.05	1	120	B70GT10	G3
70	1	.300	.300	.300	.05	.05	1	160	B70GT30	G3
75	1	.050	.050	.050	.05	.05	1	105	B75GT05	G3
75	1	.200	.200	.200	.05	.05	1	155	B75GT20	G3
75	1	.600	.500	.400	.005	.005	.250	230	A75MT60	M6
75	1	1.0	.830	.660	.005	.005	.250	270	A75MT100	M9
75	1	2.0	1.8	1.5	.005	.005	.250	305	A75MT200	M13
75	1	4.0	3.3	2.6	.01	.01	1	425	A75HT400	H11
75	1	5.6	4.6	3.6	.01	.01	1	520	A75HT560	H16
80	1	.100	.100	.100	.05	.05	1	135	B80GT10	G3
80	1	.200	.200	.200	.05	.05	1	160	B80GT20	G3
85	1	.200	.200	.200	.05	.05	1	160	B85GT20	G3
90	1	.200	.200	.200	.05	.05	1	160	B90GT20	G3
90	1	.500	.400	.300	.005	.005	.250	230	A90MT50	M6
90	1	.800	.700	.600	.005	.005	.250	270	A90MT80	M9
90	1	1.5	1.3	1.0	.005	.005	.250	305	A90MT150	M13
90	1	3.3	2.7	2.1	.01	.01	1	435	A90HT330	H11
90	1	4.4	3.6	2.9	.01	.01	1	525	A90HT440	H16
95	1	.200	.200	.200	.05	.05	1	165	B95GT20	G3
100	1	.100	.100	.100	.05	.05	1	150	B100GT10	G3
100	1	.200	.200	.200	.05	.05	1	165	B100GT20	G3
100	1	.460	.460	.340	.1	.1	1.5	200	B100GT46	G6
100	1	.650	.650	.650	.1	.1	1.5	225	B100G65	G6
100	1	.700	.600	.500	.005	.005	.250	265	A100M70	M6
100	1	1.3	1.2	1.0	.005	.005	.250	305	A100MT130	M13
100	1	3.0	2.5	2.0	.01	.01	1	435	A100HT300	H11
100	1	4.0	3.3	2.6	.01	.01	1	525	A100HT400	H16
110	1	.200	.200	.200	.05	.05	1	170	B110GT20	G3
120	1	.100	.100	.100	.05	.05	1	155	B120GT10	G3
120	1	.200	.200	.200	.05	.05	1	170	B120GT20	G3
120	1	.400	.400	.300	.1	.1	1.5	195	B120GT40	G6
120	1	.550	.550	.550	.1	.1				

Gold Box UNREGULATED

AC-DC
single output & wide adjust output

- Shipped Within 3 Days
- U.L. Recognized
- Five Year Warranty



Models in case size YA have output voltage adjustment on rear panel.

Low-cost DC power suitable for driving loads such as lamps, relays, and small motors is provided by these unregulated power supplies. All components are generously derated, insuring a long and trouble-free life; built-in fusing prevents damage due to prolonged

overloading or short circuits. Mechanically similar to the regulated supplies shown on pages 16 and 17, they are housed in extruded aluminum cases which can be mounted in any position. Many models are U.L. Recognized.

STANDARD FEATURES

- Capacitive filtering
- Fused input
- May be used in series or parallel
- No derating or heat sinking required
- Completely serviceable

SPECIFICATIONS

Input Voltage: 0-125 VAC, 50-400 Hz, single phase.

Output Voltage Adjustment: Adjustable voltage models are provided with a built-in continuously adjustable autotransformer.

Load Regulation: The nominal output voltages of single output models, and the maximum rated output voltages for models with wide adjust outputs, are based on 115 VAC input with approximately one-half load. At no load, they will increase by approximately 10%. At full load, they will be reduced by approximately 10%.

Line Regulation: Output voltage change due to line change directly proportional to input change.

Polarity: Output is floating; either positive or negative terminal may be grounded or floated up to 300 volts above ground.

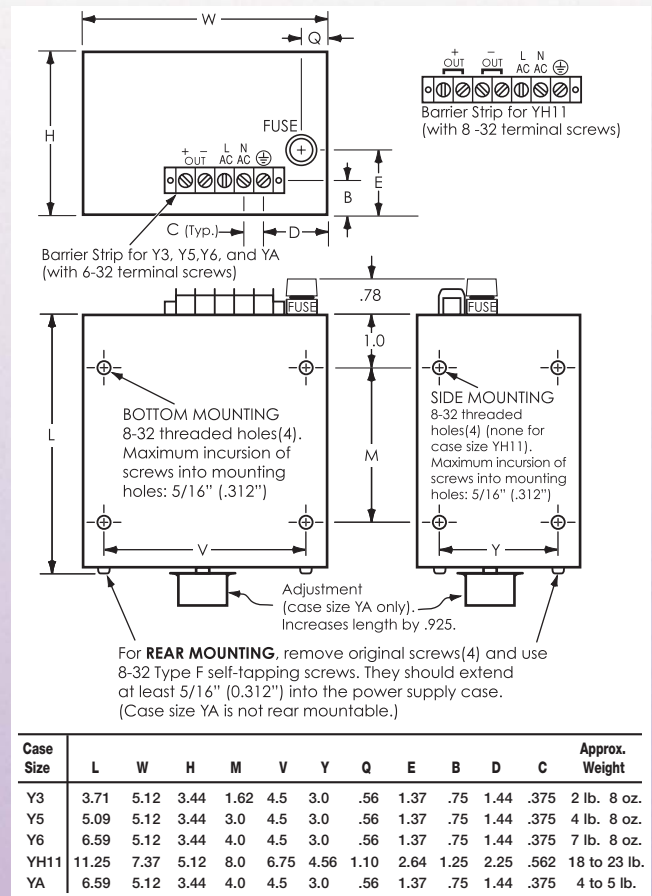
Ambient Operating Temperature: -10 to +65°C.
No derating required.

Storage Temperature: -55 to +85°C.

OPTIONS

Terminal Strip Cover: Clips on. To order, add suffix "M" to model number and \$5.00 to price.

230 Volt Input: Provision for inputs of 0-250 VAC, 50-400 Hz, replacing the standard 0-125 VAC input voltage range, is available on most models. Contact factory for information.



Mounting: Threaded mounting holes permit mounting to a chassis, cabinet wall or bracket, or they may be used on a test bench or tabletop. To mount from the power supply side of the mounting surface or for DIN rail mounting, see accessory Mounting Kits on page 33.

SINGLE OUTPUT

Nominal Output Voltage	Output Current Amps.	Output Voltage N/L-F/L	Ripple Volts RMS	(\$) Price	Model	Case Size
4	.200	4.4 to 3.6	.2	70	U4Y20	Y3
5	10.0 (@ 5.0)	6.7 to 3.6 (5.0)	1.8 (1.3)	105	U5Y1000	Y6
6	2.0	7.7 to 4.8	2.0	70	U6Y200	Y3
6	5.0	7.5 to 5.0	1.8	105	U6Y500	Y5
7	8.0	8.0 to 5.4	1.5	105	U7Y800	Y6
9	10.0 (@ 5.0)	11.5 to 7.5 (9.0)	2.3 (1.3)	105	U9Y1000	Y6
10	10.0 (@ 5.0)	12.4 to 8.0 (9.8)	2.3 (1.3)	105	U10Y1000	Y6
12	1.5	14.9 to 10.9	2.5	70	U12Y150	Y3
12	5.0	14.8 to 10.5	1.8	100	U12Y500	Y5
12	10.0 (@ 5.0)	14.1 to 9.8 (11.5)	2.3 (1.3)	110	U12Y1000	Y6
14	1.0	15.4 to 12.6	.7	70	U14Y100	Y3
14	10.0 (@ 5.0)	16.4 to 12.1 (14.0)	2.3 (1.3)	110	U14Y1000	Y6
15	10.0 (@ 5.0)	17.2 to 12.8 (14.5)	2.3 (1.3)	110	U15Y1000	Y6
16	1.0	17.6 to 14.4	.7	70	U16Y100	Y3
16	10.0 (@ 5.0)	18.8 to 14.2 (16.0)	2.3 (1.3)	110	U16Y1000	Y6
18	1.0	19.8 to 16.2	.7	70	U18Y100	Y3
18	10.0 (@ 5.0)	21.0 to 15.8 (18.0)	2.4 (1.4)	110	U18Y1000	Y6
20	4.0	22.0 to 17.5	2.0	100	U20Y400	Y5
20	10.0 (@ 5.0)	23.7 to 18.3 (20.4)	2.4 (1.4)	110	U20Y1000	Y6
24	1.0	26.4 to 21.6	1.7	70	U24Y100	Y3
24	3.5	26.0 to 21.0	2.0	100	U24Y350	Y5
24	5.0	26.5 to 21.0	2.5	110	U24Y500	Y6
24	10.0	26.8 to 21.4	2.4	135	U24Y1000	Y6
24	17.0	26.4 to 21.6	1.5	235	U24Y1700	YH11
24	23.0	27.0 to 21.0	1.5	265	U24Y2300	YH11
25	5.0	28.1 to 22.3	2.5	110	U25Y500	Y6
27	5.0	30.0 to 24.0	2.6	110	U27Y500	Y6
28	1.0	30.8 to 25.2	1.7	70	U28Y100	Y3
28	3.0	30.8 to 26.0	2.0	100	U28Y300	Y5
28	5.0	31.2 to 24.8	2.6	110	U28Y500	Y6
28	8.0	30.2 to 25.0	2.4	135	U28Y800	Y6
28	15.0	30.8 to 25.2	1.5	235	U28Y1500	YH11
28	20.0	30.4 to 24.5	1.5	265	U28Y2000	YH11
30	2.0	33.0 to 27.0	1.5	95	U30Y200	Y5
32	.400	35.2 to 28.8	.6	70	U32Y40	Y3
32	5.0	35.5 to 28.0	3.3	115	U32Y500	Y6
35	5.0	38.0 to 30.0	3.3	115	U35Y500	Y6
37	5.0	40.5 to 32.2	3.3	115	U37Y500	Y6
38	5.0	43.0 to 34.0	3.3	115	U38Y500	Y6
40	1.0	44.0 to 36.0	1.6	80	U40Y100	Y3
40	2.0	44.0 to 36.0	1.5	100	U40Y200	Y5
40	5.0	45.0 to 37.0	3.3	115	U40Y500	Y6

Nominal Output Voltage	Output Current Amps.	Output Voltage N/L-F/L	Ripple Volts RMS	(\$) Price	Model	Case Size
41	.400	45.1 to 36.9	.6	70	U41Y40	Y3
42	5.0	48.0 to 36.0	6.5	115	U42Y500	Y6
44	2.0	48.4 to 39.6	1.5	100	U44Y200	Y5
45	1.0	49.5 to 40.5	1.6	85	U45Y100	Y3
45	5.0	51.0 to 38.5	6.5	115	U45Y500	Y6
48	.400	52.8 to 43.2	.6	75	U48Y40	Y3
50	1.0	55 to 45	1.6	85	U50Y100	Y3
52	.400	57.2 to 46.8	.6	80	U52Y40	Y3
55	.250	60.5 to 49.5	.4	75	U55Y25	Y3
60	1.0	65.3 to 53.0	2.8	95	U60Y100	Y5
62	.400	69.0 to 58.0	1.5	80	U62Y40	Y3
80	.300	88.0 to 72.0	1.0	80	U80Y30	Y3
90	.400	99.0 to 81.0	2.2	80	U90Y40	Y3
95	.150	105 to 85	1.1	80	U95Y15	Y3
100	.200	110 to 93	1.0	80	U100Y20	Y3
110	.200	121 to 100	1.0	80	U110Y20	Y3
120	.200	132 to 110	1.0	80	U120Y20	Y3
140	.200	154 to 126	1.7	85	U140Y20	Y3
150	.200	165 to 135	1.7	85	U150Y20	Y3
165	.200	176 to 144	1.7	85	U165Y20	Y3
170	.200	187 to 153	2.0	85	U170Y20	Y3
180	.200	190 to 162	2.0	85	U180Y20	Y3
200	.200	220 to 180	2.0	90	U200Y20	Y3
250	.200	275 to 225	4.0	90	U250Y20	Y3
275	.100	303 to 247	3.0	85	U275Y10	Y3
275	.200	303 to 247	4.0	95	U275Y20	Y5
300	.200	330 to 270	5.0	95	U300Y20	Y5
325	.200	360 to 295	6.0	95	U325Y20	Y5
340	.100	374 to 306	3.0	85	U340Y10	Y3
360	.100	396 to 324	3.0	85	U360Y10	Y3
370	.100	407 to 333	3.0	85	U370Y10	Y3
400	.200	440 to 360	6.0	100	U400Y20	Y5
420	.100	462 to 378	6.7	85	U420Y10	Y3
475	.020	523 to 426	3.1	85	U475Y02	Y3
500	.200	550 to 450	9.1	105	U500Y20	Y5
550*	.100	605 to 495	4.8	105	U550Y10	Y5
580*	.020	638 to 522	3.1	85	U580Y02	Y3
600*	.100	660 to 540	10.0	110	U600Y10	Y5
750*	.020	825 to 675	3.1	85	U750Y02	Y3
800*	.100	880 to 720	13.0	110	U800Y10	Y5
900*	.020	990 to 810	5.0	90	U900Y02	Y3
900*	.100	990 to 810	13.0	110	U900Y10	Y5
1000*	.100	1100 to 900	13.0	110	U1000Y10	Y5

*Not U.L. recognized when this catalog was published.

WIDE ADJUST OUTPUT

Output Voltage Range	Output Current Amps.	Ripple Volts RMS	(\$) Price	Model	Case Size
0-8*	2.0	2	190	U8YA200	YA
0-15*	1.5	2.5	190	U15YA150	YA
0-54*	1.0	1.6	190	U54YA100	YA
0-95*	.300	2.2	190	U95YA30	YA
0-125*	.200	1.5	190	U125YA20	YA
0-220*	.200	2	190	U220YA20	YA
0-260*	.200	4	190	U260YA20	YA
0-370*	.100	3	190	U370YA10	YA
0-450*	.100	6.7	190	U450YA10	YA
0-800*	.020	3.1	190	U800YA02	YA
0-950*	.020	5	190	U950YA02	YA

*Not U.L. recognized when this catalog was published.





Gold Box & Narrow Profile
WIDE ADJUST OUTPUT
 LINEAR REGULATED
 AC-DC
 (fixed & adjustable current limiting)



- Shipped Within 3 Days
- All models U.L. Recognized
- **CE** (Gold Box models)
- Five Year Warranty

These power supplies have the broad adjustment capability required for analog instrumentation and circuitry, electronic system development, basic research, and similar applications.

SPECIFICATIONS

Input Voltage: 105-125 VAC, 50-400 Hz, single phase.

Regulation, Ripple (in constant voltage mode):
 Line Regulation: $\pm 0.005\%$ or 2 mV, whichever is greater.
 Load Regulation: $\pm 0.005\%$ or 2 mV, whichever is greater.
 Ripple: 0.25 mV rms.

Regulation, Ripple (in constant current mode):
 Line Regulation: $\pm 0.1\%$ or 2 mA.
 Load Regulation: $\pm 0.2\%$ or 5 mA.
 Ripple: 0.1% rms.

Remote Voltage Sensing: Provision for sensing the output voltage across the load, to compensate voltage drops in output wiring, is a standard feature.

Remote Voltage Programming: The output voltage of all models may be controlled by means of external resistance connected in series with the -S lead.

Voltage Programming Coefficient: See table.
 Calibration tolerance, $\pm 2\%$.

Current Limiting: Models with fixed current limiting have a rolloff characteristic with automatic recovery. All others have current limiting with a constant-voltage/constant-current crossover characteristic.

Polarity: Output is floating; either positive or negative terminal may be grounded or floated up to 300 volts above ground.

Temperature Coefficient (in constant voltage mode):
 0.015%/°C (Typical).

Ambient Operating Temperature: -20 to +71°C.

Storage Temperature: -55 to +85°C.

For applications requiring a constant current or adjustable current limiting, a power supply with a true constant-current characteristic, such as those with model numbers beginning with the letter P, should be used.

Mounting: Threaded mounting holes permit mounting to a chassis, cabinet wall or bracket. To mount from the power supply side of the mounting surface or for DIN rail mounting, see accessory Mounting Kits on page 33.

OPTIONS

Remote Current Limiting Adjustment: All models having numbers beginning with the letter P have a built-in (front panel) current limit control. Provision for control of the current limit setting by adjustment of an external resistance is available as an option. To order, add the prefix letter "E" to the model number, and add \$10.00 to the standard price.

The current limit setting is inversely related to resistance. Use a 200 ohm, 1/2 W potentiometer.

Overvoltage Protection: An internally mounted overvoltage protection circuit, set approximately 20% above the maximum output voltage rating of the supply, is available on all models. To order, add prefix "V" to the model number, and increase standard price as follows:

Maximum output of . . . . .	.6-60V	100-150V
All case sizes except H16 . . .	\$.25.00	\$35.00
Case size H16 . . . . .	.75.00	85.00

Terminal Strip Cover: Clips on. To order, add suffix "M" to model number and \$5.00 to price.

230 Volt Input: All models can be alternately furnished for operation on inputs of 210-250 VAC, 50-400 Hz. To order, add suffix "-230" to model number and \$25.00 to price. (For models in case sizes H11 and H16, add \$40.00.) The "-230" option requires two additional days.



GOLD BOX MODELS

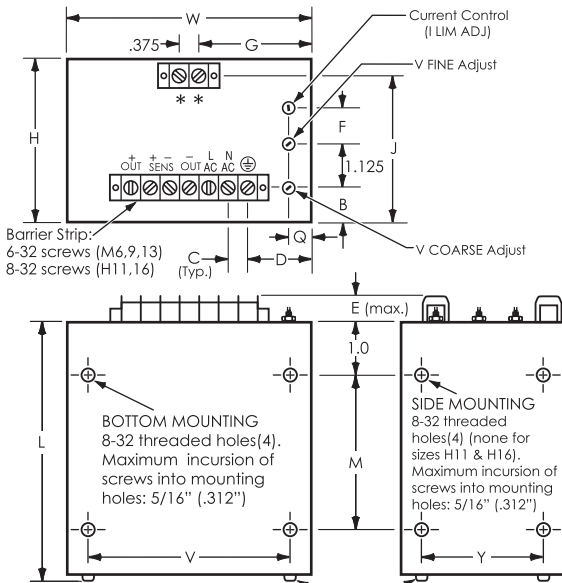
Output Voltage Range	Output Current Amps. at			Voltage Prgm. Coeff. (Ω/V)	Case Size	Voltage Programmable Fixed Current Limiting		Voltage Programmable Adjust. Current Limiting	
	40°C	55°C	71°C			Model	Price(\$)	Model	Price(\$)
0-6	1.2	1.2	1.2	820	M6	A06MX120	165	P06MX120	185
0-6	2.0	2.0	2.0	820	M6	A06MX200	185	P06MX200	205
0-6	3.0	2.5	2.0	820	M6	A06MX300	215	P06MX300	235
0-6	5.0	4.0	3.0	820	M9	A06MX500	260	P06MX500	280
0-6	8.0	7.0	6.0	820	M13	A06MX800	300	P06MX800	320
0-6	12.0	10.0	7.0	820	H11	A06HX1200	385	P06HX1200	405
0-6	16.0	13.0	10.0	820	H16	A06HX1600	460	P06HX1600	480
0-15	1.0	1.0	1.0	330	M6	A015MX100	155	P015MX100	175
0-15	2.0	1.6	1.2	330	M6	A015MX200	205	P015MX200	225
0-15	3.0	2.4	1.8	330	M9	A015MX300	260	P015MX300	280
0-15	5.0	4.0	2.5	330	M13	A015MX500	300	P015MX500	320
0-15	8.0	6.0	4.0	330	H11	A015HX800	400	P015HX800	420
0-15	10.0	8.0	6.0	330	H16	A015HX1000	460	P015HX1000	480
0-30	.50	.50	.50	160	M6	A030MX50	175	P030MX50	195
0-30	1.0	1.0	1.0	160	M6	A030MX100	205	P030MX100	225
0-30	1.6	1.4	1.2	160	M9	A030MX160	245	P030MX160	265
0-30	2.5	2.0	1.5	160	M13	A030MX250	295	P030MX250	315
0-30	4.0	3.0	2.0	160	H11	A030HX400	410	P030HX400	430
0-30	5.0	4.0	3.0	160	H16	A030HX500	475	P030HX500	495
0-50	.35	.34	.33	1000	M6	A050MX35	195	P050MX35	215
0-50	.60	.50	.40	1000	M6	A050MX60	245	P050MX60	265
0-50	.85	.75	.65	1000	M9	A050MX85	285	P050MX85	305
0-50	1.2	.96	.72	1000	M13	A050MX120	340	P050MX120	365
0-50	2.4	1.9	1.4	1000	H11	A050HX240	455	P050HX240	480
0-50	3.0	2.4	1.8	1000	H16	A050HX300	535	P050HX300	560
0-100	.10	.09	.08	500	M6	A0100MX10	245	P0100MX10	265
0-100	.25	.20	.15	500	M6	A0100MX25	285	P0100MX25	305
0-100	.45	.36	.27	500	M9	A0100MX45	330	P0100MX45	355
0-100	.60	.48	.36	500	M13	A0100MX60	385	P0100MX60	410
0-100	1.2	.96	.72	500	H11	A0100HX120	500	P0100HX120	525
0-100	1.5	1.2	.90	500	H16	A0100HX150	575	P0100HX150	600

NARROW PROFILE MODELS (for limited space applications)

Output Voltage Range	Output Current Amps. (to +71°C)	Voltage Prgm. Coeff. (Ω/V)	Case Size	Model	(\$) Price
0-7*	1.0	700	N8T	A07XN100	155
0-7*	2.1	700	N8H	A07NX210	190
0-18*	.400	270	N8T	A018XN40	150
0-18*	1.0	270	N8H	A018NX100	180
0-32*	.250	150	N8T	A032XN25	135
0-32*	.600	150	N8H	A032NX60	180
0-60*	.125	820	N8T	A060NX12	160
0-60*	.250	820	N8H	A060NX25	200
0-150*	.050	330	N8T	A0150NX05	190
0-150*	.100	330	N8H	A0150NX10	230

* Not CE certified.

Gold Box

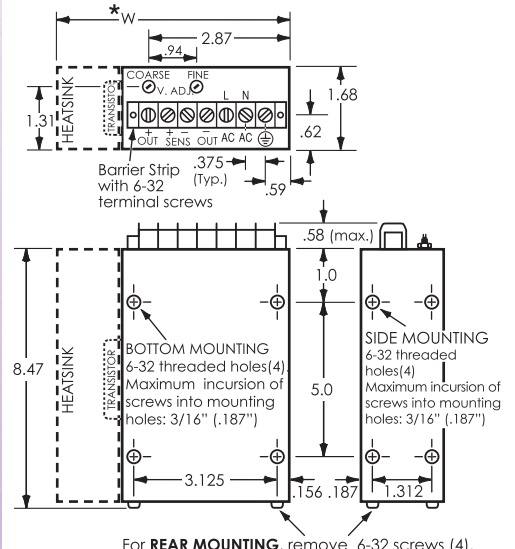


For REAR MOUNTING, remove original screws (4) and use 8-32 Type F self-tapping screws. They should extend at least 5/16" (.312") into the power supply case.

* * Connections for Remote Current Control

Case Size	L	W	H	M	V	Y	E	Q	B	C	D	F	G	J	Approx. Weight
M6	6.59	5.12	3.44	4.0	4.5	3.0	.58	.5	.75	.375	1.44	.75	2.37	3.09	5 lb. 5 oz.
M9	9.25	5.12	3.44	6.0	4.5	3.0	.58	.5	.75	.375	1.44	.75	2.37	3.09	6 lb. 3 oz.
M13	13.25	5.12	3.44	10.0	4.5	3.0	.58	.5	.75	.375	1.44	.75	2.37	3.09	8 lb. 3 oz.
H11	11.25	7.37	5.12	8.0	6.75	4.56	.78	1.12	1.25	.562	2.25	1.12	3.75	4.72	12 lb. 14 oz.
H16	16.00	7.37	5.12	11.0	6.75	4.56	.78	1.12	1.25	.562	2.25	1.12	3.75	4.72	17 lb. 12 oz.

Narrow Profile



For REAR MOUNTING, remove 6-32 screws (4). These screws may then be used for mounting, provided they extend at least 1/4" (.250) into the power supply case.

Case Size	W*	Approx. Weight
N8T	3.84	3 lb. 2 oz.
N8H	4.68	3 lb. 14 oz.

*W dimension includes TRANSISTOR on N8T case and HEATSINK on N8H case.





Gold Box & Narrow Profile DUAL TRACKING OUTPUTS

LINEAR REGULATED
AC-DC



Narrow Profile

Gold Box

- Shipped Within 3 Days
- All Models U.L. Recognized
- **CE** (Gold Box models)
- Five Year Warranty

These dual output power supplies are a convenient source of the tracking voltages required for powering operational amplifiers and related circuits. Their positive/common/negative output terminal configuration

minimizes system wiring. Provision for remote sensing permits compensation of load line effects. Although moderately priced, they are sturdily constructed and conservatively rated.

SPECIFICATIONS

Input Voltage: 105-125 VAC, 50-400 Hz, single phase.

Output Voltages: Tracking within 1%.

Load Regulation: $\pm 0.1\%$.

Line Regulation: $\pm 0.1\%$.

Ripple: 1.5 mV rms.

Polarity: Positive output, common, and negative output.

Remote Voltage Sensing: Standard.

Overload/Short Circuit Protection: Electronic current limiting.

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

Ambient Operating Temperature: -10 to +71°C.

Storage Temperature: -55 to +85°C.

Mounting: Threaded mounting holes permit mounting to a chassis, cabinet wall or bracket. To mount from the power supply side of the mounting surface or for DIN rail mounting, see accessory Mounting Kits on page 33.

OPTIONS

Overvoltage Protection: A built-in preset overvoltage protection circuit is available on all models. If either output fails, both outputs are 'crowbarred'. To order, add prefix "V" to the model number, and increase standard price by \$30.00.

Terminal Strip Cover: Clips on. To order, add suffix "M" to model number and \$5.00 to price.

230 Volt Input: All models can be alternately furnished for operation on inputs of 210-250 VAC, 50-400 Hz. To order, add suffix "-230" to model number and \$25.00 to price. The "-230" option requires two additional days.

GOLD BOX MODELS

Nominal Output Voltages	Adjust Range $\pm V$	Amps. per Output at			(\$) Price	Model	Case Size
		40°C	55°C	71°C			
± 5	.5	.750	.650	.550	190	TD5-75	TG5
± 5	.5	1.5	1.25	1.0	225	TD5-150	TG6
± 5	.5	2.5	2.0	1.5	270	TD5-250	TG9
± 12	1	1.0	.900	.800	195	TD12-100	TG5
± 12	1	1.6	1.4	1.0	230	TD12-160	TG6
± 12	1	2.5	2.0	1.5	270	TD12-250	TG9
± 12	.5	4.5	3.7	3.0	335	TD12-450	TG13
± 12	.5	8.5	7.0	5.5	440	TD12-850	TH11
± 15	1	.400	.400	.400	150	TD15-40	TG5
± 15	1	1.0	.900	.800	195	TD15-100	TG5
± 15	1	1.6	1.4	1.0	230	TD15-160	TG6
± 15	1	2.5	2.0	1.5	270	TD15-250	TG9
± 15	.5	4.5	3.7	3.0	335	TD15-450	TG13
± 15	.5	8.5	7.0	5.5	440	TD15-850	TH11

FRONT COVER CONNECTIONS:



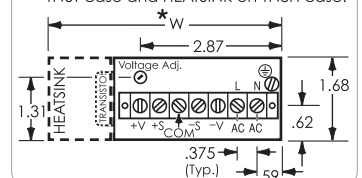
NARROW PROFILE MODELS (for limited space applications)

Nominal Output Voltages	Adjust Range $\pm V$	Amps. per Output at			(\$) Price	Model	Case Size
		40°C	55°C	71°C			
$\pm 12^*$	1	.500	.500	.400	165	FD12-50A	TN6T
$\pm 12^*$	.5	1.0	.900	.800	220	LD12-100	TN8H
$\pm 15^*$	1	.500	.500	.400	165	FD15-50A	TN6T
$\pm 15^*$	.5	1.0	.900	.800	220	LD15-100	TN8H

* Not CE certified.

FRONT COVER for TN6T & TN8H cases.

* W dimension includes TRANSISTOR on TN6T case and HEATSINK on TN8H case.





Gold Box
TRIPLE ISOLATED OUTPUTS
 LINEAR REGULATED
 AC-DC

- Shipped Within 3 Days
- All Models U.L. Recognized
- **CE**
- Five Year Warranty



Triple isolated output power supplies provide the features and characteristics of three supplies in one compact, easy-to-use package. They are available in the voltage combinations most frequently required for driving microprocessors and associated circuitry.

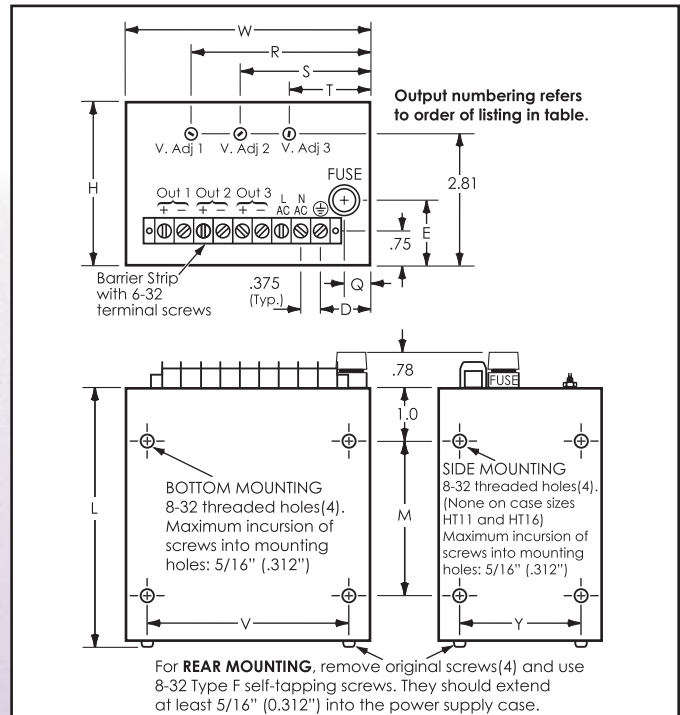
SPECIFICATIONS

- Input Voltage:** 105-125 VAC, 50-400 Hz, single phase.
 - Polarity:** Outputs are floating. Each output may be independently connected to provide any combination of positive and negative voltages. Outputs may be floated up to 300 volts above ground.
 - Temperature Coefficient:** 0.02%/°C (Typical).
 - Ambient Operating Temperature:** -10 to +60°C. No derating required.
 - Storage Temperature:** -55 to +85°C.
 - Accessory Mounting Kits:** See page 33.
- OPTIONS**
- Overvoltage Protection:** Separate overvoltage protection circuit on each output. Add prefix "3V" to model number and increase standard price as follows:
 Case sizes GT5 - GT13 . . . \$45.00
 Case size HT11 \$65.00
 Case size HT16 \$95.00

Terminal Strip Cover: Clips on. To order, add suffix "M" to model number and \$5.00 to price.

230 Volt Input: Add suffix "-230" to the model number and \$25.00 to the price. Requires two additional days.

Nominal Output Voltages	Adjust Range ± V	Output Current Amps.	Regulation		Ripple mV RMS	(\$) Price	Model	Case Size
			Load ± %	Line ± %				
5	.25	3.0	.15	.15	1	240	512126A	GT6
5	.25	1.0	.15	.15	1			
12	1	.600	.15	.15	1			
5	.25	6.0	.15	.15	1	295	512129A	GT9
5	.25	2.0	.15	.15	1			
12	1	1.2	.15	.15	1			
5	.25	6.0	.15	.15	1	295	59129A	GT9
9	1	1.4	.15	.15	1			
12	1	1.2	.15	.15	1			
5	.25	2.0	.15	.15	1	215	512125A	GT5
12	1	.300	.15	.15	1			
12	1	.300	.15	.15	1			
5	.25	3.0	.15	.15	1	240	512126A	GT6
12	1	.600	.15	.15	1			
12	1	.600	.15	.15	1			
5	.25	6.0	.15	.15	1	295	512129A	GT9
12	1	1.2	.15	.15	1			
12	1	1.2	.15	.15	1			
5	.25	8.0	.15	.15	1	335	5121213A	GT13
12	1	1.3	.15	.15	1			
12	1	1.3	.15	.15	1			
5	.5	15.0	.15	.15	1	410	5121211A	HT11
12	1	2.0	.15	.15	1			
12	1	2.0	.15	.15	1			



Case Size	L	W	H	M	V	Y	D	E	Q	R	S	T	Approx. Weight
GT5	5.09	5.12	3.44	3.0	4.50	3.0	1.06	1.37	.56	3.75	2.75	1.75	4 lb. 14 oz.
GT6	6.59	5.12	3.44	4.0	4.50	3.0	1.06	1.37	.56	3.75	2.75	1.75	5 lb. 8 oz.
GT9	9.25	5.12	3.44	6.0	4.50	3.0	1.06	1.37	.56	3.75	2.75	1.75	7 lb. 4 oz.
GT13	13.25	5.12	3.44	10.0	4.50	3.0	1.06	1.37	.56	3.75	2.75	1.75	12 lb.
HT11	11.25	7.37	5.12	8.0	6.75	4.56	2.18	3.25	1.13	4.88	3.88	2.88	18 lb. 4 oz.
HT16	16.00	7.37	5.12	11.0	6.75	4.56	2.18	3.25	1.13	4.88	3.88	2.88	26 lb.

Nominal Output Voltages	Adjust Range ± V	Output Current Amps.	Regulation		Ripple mV RMS	(\$) Price	Model	Case Size
			Load ± %	Line ± %				
5	.5	20.0	.15	.15	1	470	5121216A	HT16
12	1	3.0	.15	.15	1			
12	1	3.0	.15	.15	1			
5	.25	2.0	.15	.15	1	215	515155A	GT5
15	1	.250	.15	.15	1			
15	1	.250	.15	.15	1			
5	.25	3.0	.15	.15	1	240	515156A	GT6
15	1	.500	.15	.15	1			
15	1	.500	.15	.15	1			
5	.25	6.0	.15	.15	1	295	515159A	GT9
15	1	1.0	.15	.15	1			
15	1	1.0	.15	.15	1			
5	.25	8.0	.15	.15	1	335	5151513A	GT13
15	1	1.1	.15	.15	1			
15	1	1.1	.15	.15	1			
5	.5	15.0	.15	.15	1	410	5151511A	HT11
15	1	1.5	.15	.15	1			
15	1	1.5	.15	.15	1			
5	.5	20.0	.15	.15	1	470	5151516A	HT16
15	1	2.5	.15	.15	1			
15	1	2.5	.15	.15	1			





DC-DC Converters

Mini Encapsulated - **PC Board mounting**
REGULATED
single & dual tracking outputs

- Shipped Within 3 Days
- One Year Warranty



These versatile DC-DC Converters are ideally suited for powering a wide variety of analog and digital circuitry, such as op amps, logic and microprocessors. They may be mounted directly on a printed circuit board for OEM applications, or installed in a socket for developmental and small quantity requirements. For DC-DC Converters with screw terminals, see pages 28 and 29.

Efficiency is in the order of 65%, and is maintained down to low levels of output current. Input reflected ripple is reduced to less than 1% by means of a standard built-in pi filter, and electrostatic shielding on all six sides minimizes radiated energy. High input/output isolation permits separation of the output from the dc input bus to minimize circuit interaction due to ground loops, and the use of inputs in either polarity.

SPECIFICATIONS

Input Voltage: Nominal voltage $\pm 10\%$.

Input Reflected Ripple: 1% E_{in} (max.)

Output Regulation:

Line: $\pm 0.02\%$

Load: $\pm 0.05\%$

Output Ripple (@ 25 MHz bandwidth):

1 mV rms, 50 mV p-p (5-15V outputs).

1.5 mV rms, 75 mV p-p (18-28V outputs).

Output Voltage Setting: Outputs are factory preset to within $\pm 1\%$ of the nominal output voltage.

T/C terminal: For single output models, the T/C terminal can be used to trim the output more precisely to the nominal voltage rating by connecting an external resistor from the T/C terminal to either the + or - terminal. For dual output models, the T/C terminal is the output common.

Polarity: The output of single output models may be connected in either polarity. Dual output models have a positive/common/negative output terminal configuration.

Transient Response (NL-FL): 50 microseconds.

Overload/Short Circuit Protection: Electronic current limiting with automatic recovery. Models in case size ELC-10 also have thermal protection with automatic reset.

Input/Output Isolation:

Voltage: 500 Vdc

Resistance: 100 megohms

Capacitance: 100 pF

Switching Frequency: 20 kHz minimum.

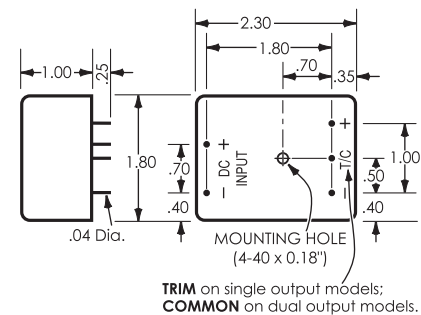
Temperature Coefficient: 0.02%/°C (Typical).

Ambient Operating Temperature: -20 to $+71^\circ\text{C}$.

Storage Temperature: -40 to $+85^\circ\text{C}$.

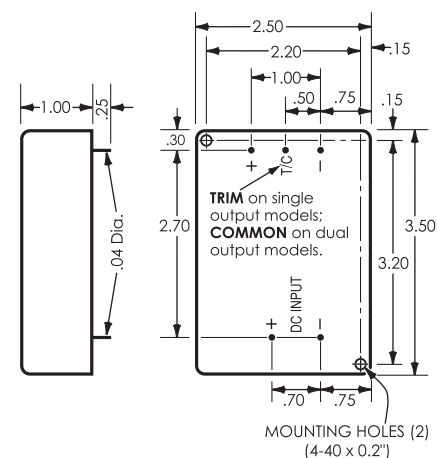
Humidity: 20% to 80% R.H. (non-condensing).

Mounting: May be mounted on printed circuit board or in socket (see page 6).



Case Size ESC-10

Approx. Weight: 5 oz.



Case Size ELC-10

Approx. Weight: 12 oz.

SINGLE OUTPUT, FOR PC BOARD MOUNTING

Nominal Input Voltage	Nominal Output Voltage	Output Current Amps. at			(\$) Price	Model	Case Size
		40°C	55°C	71°C			
5	5	1.25	1.25	1.00	98	5E5E125	ESC-10
5	5	2.50	2.25	2.00	119	5E5E250	ELC-10
5	6	1.00	1.00	.80	98	5E6E100	ESC-10
5	6	2.00	1.80	1.60	119	5E6E200	ELC-10
5	8	.75	.75	.60	98	5E8E75	ESC-10
5	8	1.50	1.35	1.20	119	5E8E150	ELC-10
5	9	.70	.70	.55	98	5E9E70	ESC-10
5	9	1.40	1.25	1.10	119	5E9E140	ELC-10
5	10	.65	.65	.50	98	5E10E65	ESC-10
5	10	1.30	1.15	1.00	119	5E10E130	ELC-10
5	12	.60	.60	.50	98	5E12E60	ESC-10
5	12	1.20	1.10	1.00	119	5E12E120	ELC-10
5	13	.55	.55	.45	98	5E13E55	ESC-10
5	13	1.10	1.00	.90	119	5E13E110	ELC-10
5	15	.50	.50	.40	98	5E15E50	ESC-10
5	15	1.00	.90	.80	119	5E15E100	ELC-10
5	18	.40	.40	.30	98	5E18E40	ESC-10
5	18	.80	.70	.60	119	5E18E80	ELC-10
5	20	.35	.35	.28	98	5E20E35	ESC-10
5	20	.70	.60	.50	119	5E20E70	ELC-10
5	24	.25	.25	.20	98	5E24E25	ESC-10
5	24	.60	.55	.50	119	5E24E60	ELC-10
5	28	.25	.25	.20	98	5E28E25	ESC-10
5	28	.50	.45	.40	119	5E28E50	ELC-10
12	5	1.25	1.25	1.00	98	12E5E125	ESC-10
12	5	2.50	2.25	2.00	119	12E5E250	ELC-10
12	6	1.00	1.00	.80	98	12E6E100	ESC-10
12	6	2.00	1.80	1.60	119	12E6E200	ELC-10
12	8	.75	.75	.60	98	12E8E75	ESC-10
12	8	1.50	1.35	1.20	119	12E8E150	ELC-10
12	9	.70	.70	.55	98	12E9E70	ESC-10
12	9	1.40	1.25	1.10	119	12E9E140	ELC-10
12	10	.65	.65	.50	98	12E10E65	ESC-10
12	10	1.30	1.15	1.00	119	12E10E130	ELC-10
12	12	.60	.60	.50	98	12E12E60	ESC-10
12	12	1.20	1.10	1.00	119	12E12E120	ELC-10
12	13	.55	.55	.45	98	12E13E55	ESC-10
12	13	1.10	1.00	.90	119	12E13E110	ELC-10
12	15	.50	.50	.40	98	12E15E50	ESC-10
12	15	1.00	.90	.80	119	12E15E100	ELC-10
12	18	.40	.40	.30	98	12E18E40	ESC-10
12	18	.80	.70	.60	119	12E18E80	ELC-10
12	20	.35	.35	.28	98	12E20E35	ESC-10
12	20	.70	.60	.50	119	12E20E70	ELC-10
12	24	.25	.25	.20	98	12E24E25	ESC-10
12	24	.60	.55	.50	119	12E24E60	ELC-10
12	28	.25	.25	.20	98	12E28E25	ESC-10
12	28	.50	.45	.40	119	12E28E50	ELC-10
15	5	1.25	1.25	1.00	98	15E5E125	ESC-10
15	5	2.50	2.25	2.00	119	15E5E250	ELC-10
15	6	1.00	1.00	.80	98	15E6E100	ESC-10
15	6	2.00	1.80	1.60	119	15E6E200	ELC-10
15	8	.75	.75	.60	98	15E8E75	ESC-10
15	8	1.50	1.35	1.20	119	15E8E150	ELC-10
15	9	.70	.70	.55	98	15E9E70	ESC-10
15	9	1.40	1.25	1.10	119	15E9E140	ELC-10
15	10	.65	.65	.50	98	15E10E65	ESC-10
15	10	1.30	1.15	1.00	119	15E10E130	ELC-10
15	12	.60	.60	.50	98	15E12E60	ESC-10
15	12	1.20	1.10	1.00	119	15E12E120	ELC-10
15	13	.55	.55	.45	98	15E13E55	ESC-10
15	13	1.10	1.00	.90	119	15E13E110	ELC-10
15	15	.50	.50	.40	98	15E15E50	ESC-10
15	15	1.00	.90	.80	119	15E15E100	ELC-10
15	18	.40	.40	.30	98	15E18E40	ESC-10
15	18	.80	.70	.60	119	15E18E80	ELC-10

Nominal Input Voltage	Nominal Output Voltage	Output Current Amps. at			(\$) Price	Model	Case Size
		40°C	55°C	71°C			
15	20	.35	.35	.28	98	15E20E35	ESC-10
15	20	.70	.60	.50	119	15E20E70	ELC-10
15	24	.25	.25	.20	98	15E24E25	ESC-10
15	24	.60	.55	.50	119	15E24E60	ELC-10
15	28	.25	.25	.20	98	15E28E25	ESC-10
15	28	.50	.45	.40	119	15E28E50	ELC-10
24	5	1.25	1.25	1.00	98	24E5E125	ESC-10
24	5	2.50	2.25	2.00	119	24E5E250	ELC-10
24	6	1.00	1.00	.80	98	24E6E100	ESC-10
24	6	2.00	1.80	1.60	119	24E6E200	ELC-10
24	8	.75	.75	.60	98	24E8E75	ESC-10
24	8	1.50	1.35	1.20	119	24E8E150	ELC-10
24	9	.70	.70	.55	98	24E9E70	ESC-10
24	9	1.40	1.25	1.10	119	24E9E140	ELC-10
24	10	.65	.65	.50	98	24E10E65	ESC-10
24	10	1.30	1.15	1.00	119	24E10E130	ELC-10
24	12	.60	.60	.50	98	24E12E60	ESC-10
24	12	1.20	1.10	1.00	119	24E12E120	ELC-10
24	13	.55	.55	.45	98	24E13E55	ESC-10
24	13	1.10	1.00	.90	119	24E13E110	ELC-10
24	15	.50	.50	.40	98	24E15E50	ESC-10
24	15	1.00	.90	.80	119	24E15E100	ELC-10
24	18	.40	.40	.30	98	24E18E40	ESC-10
24	18	.80	.70	.60	119	24E18E80	ELC-10
24	20	.35	.35	.28	98	24E20E35	ESC-10
24	20	.70	.60	.50	119	24E20E70	ELC-10
24	24	.25	.25	.20	98	24E24E25	ESC-10
24	24	.60	.55	.50	119	24E24E60	ELC-10
24	28	.25	.25	.20	98	24E28E25	ESC-10
24	28	.50	.45	.40	119	24E28E50	ELC-10
28	5	1.25	1.25	1.00	98	28E5E125	ESC-10
28	5	2.50	2.25	2.00	119	28E5E250	ELC-10
28	6	1.00	1.00	.80	98	28E6E100	ESC-10
28	6	2.00	1.80	1.60	119	28E6E200	ELC-10
28	8	.75	.75	.60	98	28E8E75	ESC-10
28	8	1.50	1.35	1.20	119	28E8E150	ELC-10
28	9	.70	.70	.55	98	28E9E70	ESC-10
28	9	1.40	1.25	1.10	119	28E9E140	ELC-10
28	10	.65	.65	.50	98	28E10E65	ESC-10
28	10	1.30	1.15	1.00	119	28E10E130	ELC-10
28	12	.60	.60	.50	98	28E12E60	ESC-10
28	12	1.20	1.10	1.00	119	28E12E120	ELC-10
28	13	.55	.55	.45	98	28E13E55	ESC-10
28	13	1.10	1.00	.90	119	28E13E110	ELC-10
28	15	.50	.50	.40	98	28E15E50	ESC-10
28	15	1.00	.90	.80	119	28E15E100	ELC-10
28	18	.40	.40	.30	98	28E18E40	ESC-10
28	18	.80	.70	.60	119	28E18E80	ELC-10
28	20	.35	.35	.28	98	28E20E35	ESC-10
28	20	.70	.60	.50	119	28E20E70	ELC-10
28	24	.25	.25	.20	98	28E24E25	ESC-10
28	24	.60	.55	.50	119	28E24E60	ELC-10
28	28	.25	.25	.20	98	28E28E25	ESC-10
28	28	.50	.45	.40	119	28E28E50	ELC-10
48	5	1.25	1.25	1.00	98	48E5E125	ESC-10
48	5	2.50	2.25	2.00	119	48E5E250	ELC-10
48	6	1.00	1.00	.80	98	48E6E100	ESC-10
48	6	2.00	1.80	1.60	119	48E6E200	ELC-10
48	8	.75	.75	.60	98	48E8E75	ESC-10
48	8	1.50	1.35	1.20	119	48E8E150	ELC-10
48	9	.70	.70	.55	98	48E9E70	ESC-10
48	9	1.40	1.25	1.10	119	48E9E140	ELC-10
48	10	.65	.65	.50	98	48E10E65	ESC-10
48	10	1.30	1.15	1.00	119	48E10E130	ELC-10
48	12	.60	.60	.50	98	48E12E60	ESC-10
48	12	1.20	1.10	1.00	119	48E12E120	ELC-10
48	13	.55	.55	.45	98	48E13E55	ESC-10
48	13	1.10	1.00	.90	119	48E13E110	ELC-10
48	15	.50	.50	.40	98	48E15E50	ESC-10
48	15	1.00	.90	.80	119	48E15E100	ELC-10
48	18	.40	.40	.30	98	48E18E40	ESC-10
48	18	.80	.70	.60	119	48E18E80	ELC-10
48	20	.35	.35	.28	98	48E20E35	ESC-10
48	20	.70	.60	.50	119	48E20E70	ELC-10
48	24	.25	.25	.20	98	48E24E25	ESC-10
48	24	.60	.55	.50	119	48E24E60	ELC-10
48	28	.25	.25	.20	98	48E28E25	ESC-10
48	28	.50	.45	.40	119	48E28E50	ELC-10

120 to 180

Contact factory.

DUAL TRACKING OUTPUTS

Nominal Input Voltage	Nominal Output Voltages	Amps. per Output at			(\$) Price	Model	Case Size
		40°C	55°C	71°C			
5	±10	.30	.30	.25	105	5E10D30	ESC-10
5	±10	.60	.55	.50	125	5E10D60	ELC-10
5	±12	.30	.30	.25	105	5E12D30	ESC-10
5	±12	.60	.55	.50	125	5E12D60	ELC-10
5	±15	.25	.25	.25	105	5E15D25	ESC-10
5	±15	.50	.45	.40	125	5E15D50	ELC-10
5	±18	.20	.20	.20	105	5E18D20	ESC-10
5	±18	.40	.35	.30	125	5E18D40	ELC-10
12	±10	.30	.30	.25	105	12E10D30	ESC-10
12	±10	.60	.55	.50	125	12E10D60	ELC-10
12	±12	.30	.30	.25	105	12E12D30	ESC-10
12	±12	.60	.55	.50	125	12E12D60	ELC-10
12	±15	.25	.25	.25	105	12E15D25	ESC-10
12	±15	.50	.45	.40	125	12E15D50	ELC-10
12	±18	.20	.20	.20	105	12E18D20	ESC-10
12	±18	.40	.35	.30	125	12E18D40	ELC-10
15	±10	.30	.30	.25	105	15E10D30	ESC-10
15	±10	.60	.55	.50	125	15E10D60	ELC-10
15	±12	.30	.30	.25	105	15E12D30	ESC-10
15	±12	.60	.55	.50			



DC-DC Converters

Mini Encapsulated - **with screw terminals**
REGULATED
single & dual tracking outputs



- Shipped Within 3 Days
- One Year Warranty

These DC-DC Converters have the versatility to be used in a broad range of applications. Threaded mounting holes permit them to be mounted to a chassis, cabinet wall or bracket, or they may be used on a test bench or tabletop. Screw terminals provide easy connection without sockets or soldering.

Input/output isolation prevents ground loops, and permits the use of inputs of either polarity; outputs of single output models may be used in either polarity and floated up to 500 volts above the input. Short circuit and thermal protection, and rugged encapsulated construction, assure years of reliable service.

SPECIFICATIONS

Input Voltage: Nominal voltage $\pm 10\%$.

Input Reflected Ripple: $1\% E_{in}$ (max.)

Output Ripple (@25 MHz bandwidth):

1 mV rms, 50 mV p-p (5-15V outputs).

1.5 mV rms, 75 mV p-p (18-28V outputs).

Output Voltage Setting: Outputs are factory preset to within $\pm 1\%$ of the nominal output voltage.

T/C terminal: For single output models, the T/C terminal can be used to trim the output more precisely to the nominal voltage rating by connecting an external resistor from the T/C terminal to either the + or - terminal. For dual output models, the T/C terminal is the output common.

Polarity: The output of single output models may be connected in either polarity. Dual output models have a positive/common/negative output terminal configuration.

Transient Response (NL-FL): 50 microseconds.

Overload/Short Circuit Protection: Electronic current limiting with automatic recovery. All models have thermal protection with automatic reset.

Input/Output Isolation:

Voltage: 500 Vdc

Resistance: 100 megohms

Capacitance: 100 pF

Switching Frequency: 20 kHz minimum.

Temperature Coefficient: $0.02\%/^{\circ}\text{C}$ (Typical).

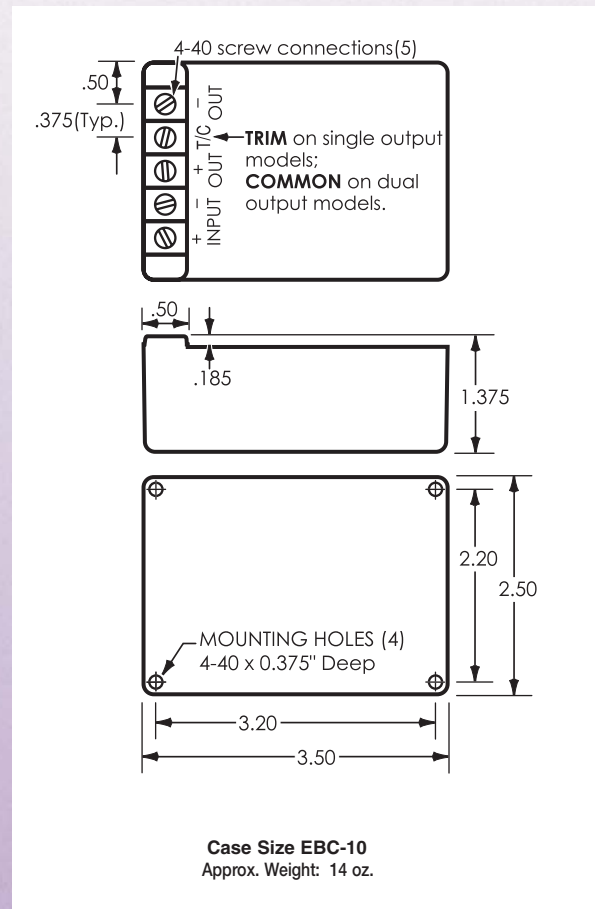
Ambient Operating Temperature: -20 to $+71^{\circ}\text{C}$.

Storage Temperature: -40 to $+85^{\circ}\text{C}$.

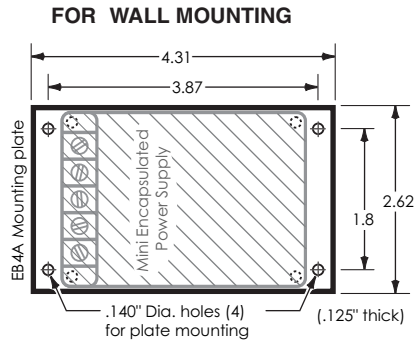
Humidity: 20% to 80% R.H. (non-condensing).

Case Size: EBC-10.

Mounting: Threaded mounting holes permit mounting to a chassis, cabinet wall or bracket, or they may be used on a test bench or tabletop. When wall-mounting or DIN rail mounting is desired, use accessory Mounting Kits on page 29.

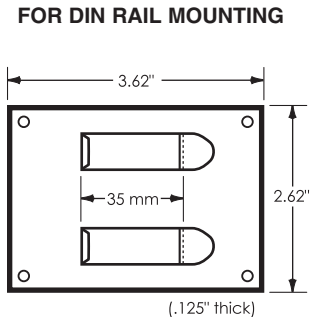


ACCESSORY MOUNTING KITS For use with 'Mini Encapsulated - with Screw Terminals' power supplies.



Use Mounting Kit EB4A to mount from the power supply side of the mounting surface, necessary when the other side of the mounting surface is inaccessible. This kit consists of an aluminum plate and four screws for attaching it to the power supply, effectively adding mounting flanges to any Mini Encapsulated power supply with screw terminals or any Mini DC-DC Converter with screw terminals.

Model EB4A \$ 8



Mounting Kit EB35DIN consists of an aluminum plate, with two DIN clips attached to it, and four screws for attaching the plate to the bottom of any Mini Encapsulated power supply with screw terminals or any Mini DC-DC Converter with screw terminals. The power supply can then be snapped onto a 35mm 'top hat' type of DIN rail.

Model EB35DIN \$12

SINGLE OUTPUT, WITH SCREW TERMINALS

Nominal Input Voltage	Nominal Output Voltage	Output Current Amps. at			Regulation		(\$) Price	Model
		40°C	55°C	71°C	Load ±%	Line ±%		
5	5	2.50	2.25	2.00	.15	.02	129	5EB5E250
5	6	2.00	1.80	1.60	.15	.02	129	5EB6E200
5	8	1.50	1.35	1.20	.10	.02	129	5EB8E150
5	9	1.40	1.25	1.10	.10	.02	129	5EB9E140
5	10	1.30	1.15	1.00	.10	.02	129	5EB10E130
5	12	1.20	1.10	1.00	.05	.02	129	5EB12E120
5	13	1.10	1.00	.90	.05	.02	129	5EB13E110
5	15	1.00	.90	.80	.05	.02	129	5EB15E100
5	18	.80	.70	.60	.05	.02	129	5EB18E80
5	20	.70	.60	.50	.05	.02	129	5EB20E70
5	24	.60	.55	.50	.05	.02	129	5EB24E60
5	28	.50	.45	.40	.05	.02	129	5EB28E50
12	5	2.50	2.25	2.00	.15	.02	129	12EB5E250
12	6	2.00	1.80	1.60	.15	.02	129	12EB6E200
12	8	1.50	1.35	1.20	.10	.02	129	12EB8E150
12	9	1.40	1.25	1.10	.10	.02	129	12EB9E140
12	10	1.30	1.15	1.00	.10	.02	129	12EB10E130
12	12	1.20	1.10	1.00	.05	.02	129	12EB12E120
12	13	1.10	1.00	.90	.05	.02	129	12EB13E110
12	15	1.00	.90	.80	.05	.02	129	12EB15E100
12	18	.80	.70	.60	.05	.02	129	12EB18E80
12	20	.70	.60	.50	.05	.02	129	12EB20E70
12	24	.60	.55	.50	.05	.02	129	12EB24E60
12	28	.50	.45	.40	.05	.02	129	12EB28E50
15	5	2.50	2.25	2.00	.15	.02	129	15EB5E250
15	6	2.00	1.80	1.60	.15	.02	129	15EB6E200
15	8	1.50	1.35	1.20	.10	.02	129	15EB8E150
15	9	1.40	1.25	1.10	.10	.02	129	15EB9E140
15	10	1.30	1.15	1.00	.10	.02	129	15EB10E130
15	12	1.20	1.10	1.00	.05	.02	129	15EB12E120

Nominal Input Voltage	Nominal Output Voltage	Output Current Amps. at			Regulation		(\$) Price	Model
		40°C	55°C	71°C	Load ±%	Line ±%		
15	13	1.10	1.00	.90	.05	.02	129	15EB13E110
15	15	1.00	.90	.80	.05	.02	129	15EB15E100
15	18	.80	.70	.60	.05	.02	129	15EB18E80
15	20	.70	.60	.50	.05	.02	129	15EB20E70
15	24	.60	.55	.50	.05	.02	129	15EB24E60
15	28	.50	.45	.40	.05	.02	129	15EB28E50
24	5	2.50	2.25	2.00	.15	.02	129	24EB5E250
24	6	2.00	1.80	1.60	.15	.02	129	24EB6E200
24	8	1.50	1.35	1.20	.10	.02	129	24EB8E150
24	9	1.40	1.25	1.10	.10	.02	129	24EB9E140
24	10	1.30	1.15	1.00	.10	.02	129	24EB10E130
24	12	1.20	1.10	1.00	.05	.02	129	24EB12E120
24	13	1.10	1.00	.90	.05	.02	129	24EB13E110
24	15	1.00	.90	.80	.05	.02	129	24EB15E100
24	18	.80	.70	.60	.05	.02	129	24EB18E80
24	20	.70	.60	.50	.05	.02	129	24EB20E70
24	24	.60	.55	.50	.05	.02	129	24EB24E60
24	28	.50	.45	.40	.05	.02	129	24EB28E50
28	5	2.50	2.25	2.00	.15	.02	129	28EB5E250
28	6	2.00	1.80	1.60	.15	.02	129	28EB6E200
28	8	1.50	1.35	1.20	.10	.02	129	28EB8E150
28	9	1.40	1.25	1.10	.10	.02	129	28EB9E140
28	10	1.30	1.15	1.00	.10	.02	129	28EB10E130
28	12	1.20	1.10	1.00	.05	.02	129	28EB12E120
28	13	1.10	1.00	.90	.05	.02	129	28EB13E110
28	15	1.00	.90	.80	.05	.02	129	28EB15E100
28	18	.80	.70	.60	.05	.02	129	28EB18E80
28	20	.70	.60	.50	.05	.02	129	28EB20E70
28	24	.60	.55	.50	.05	.02	129	28EB24E60
28	28	.50	.45	.40	.05	.02	129	28EB28E50

120 to 180 Contact factory.

DUAL TRACKING OUTPUTS

Nominal Input Voltage	Nominal Output Voltages	Amps. per Output at			Regulation		(\$) Price	Model
		40°C	55°C	71°C	Load ±%	Line ±%		
5	±10	.60	.55	.50	.05	.02	135	5EB10D60
5	±12	.60	.55	.50	.05	.02	135	5EB12D60
5	±15	.50	.45	.40	.05	.02	135	5EB15D50
5	±18	.40	.35	.30	.05	.02	135	5EB18D40
12	±10	.60	.55	.50	.05	.02	135	12EB10D60
12	±12	.60	.55	.50	.05	.02	135	12EB12D60
12	±15	.50	.45	.40	.05	.02	135	12EB15D50
12	±18	.40	.35	.30	.05	.02	135	12EB18D40
15	±10	.60	.55	.50	.05	.02	135	15EB10D60
15	±12	.60	.55	.50	.05	.02	135	15EB12D60

Nominal Input Voltage	Nominal Output Voltages	Amps. per Output at			Regulation		(\$) Price	Model
		40°C	55°C	71°C	Load ±%	Line ±%		
15	±15	.50	.45	.40	.05	.02	135	15EB15D50
15	±18	.40	.35	.30	.05	.02	135	15EB18D40
24	±10	.60	.55	.50	.05	.02	135	24EB10D60
24	±12	.60	.55	.50	.05	.02	135	24EB12D60
24	±15	.50	.45	.40	.05	.02	135	24EB15D50
24	±18	.40	.35	.30	.05	.02	135	24EB18D40
28	±10	.60	.55	.50	.05	.02	135	28EB10D60
28	±12	.60	.55	.50	.05	.02	135	28EB12D60
28	±15	.50	.45	.40	.05	.02	135	28EB15D50
28	±18	.40	.35	.30	.05	.02	135	28EB18D40





NEW!!

**Narrow Profile
DC-DC Converters (to 288 watts)**

REGULATED
wide input ranges
single output

- Shipped Within 3 Days
- Five Year Warranty (fans-one year)



These state-of-the-art DC-DC converters combine excellent regulation and ripple specifications with broad input ranges. They are available in a large selection of

output voltages and current ratings. Accessory mounting kits permit easy installation on a vertical panel, wall or on a DIN rail.

STANDARD FEATURES

- Tight regulation, low ripple
- Extensive filtering and shielding
- Output status indicator
- Input/output isolation exceeds 2828Vdc
- Extruded aluminum case

SPECIFICATIONS

Nominal Input	Operating Input Voltage Range
24 Vdc	18-36 Vdc (or 18-75 Vdc; see table)
48 Vdc	36-75 Vdc (or 18-75 Vdc; see table)
125 Vdc	110-350 Vdc (see table)
250 Vdc	110-350 Vdc (see table)

Input Reverse Polarity Protection: Internal shunt diode (external fuse required).

Startup Time: 800 mS typical.

Regulation:

- Line: $\pm 0.05\%$
- Load: $\pm 0.05\%$

Output Voltage Remote Adjustment: The output voltage may be controlled by means of an external 1K potentiometer.

Output Indicator (DC out): Green LED.

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

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

Temperature Coefficient: $\pm 0.02\%/^{\circ}\text{C}$ (Typical).

Transient Response: 300 μS 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:

Case sizes DN6A, DN6B: automatic reset.

Case sizes DN8, DN8A: latches power supply OFF, reset by momentarily removing DC input power.

Output Inhibit (DN8 and DN8A case sizes only):

Applying between +3 and +25 Vdc (relative to the -Out terminal) to the inhibit terminal will disable the supply.

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

Thermal Protection:

Case sizes DN8, DN8A, DN6A: thermostat, self-resetting.

Case size DN6B: inherently protected.

Efficiency: (Typical, at nominal input voltage, with full load.) 65 to 80%

Ambient Operating Temperature: 0 to +71°C.

Storage Temperature: -40 to +85°C.

Cooling: Case sizes DN8, DN8A, DN6A: forced-air cooled; air enters rear of power supply and exits from top. Case size DN6B: convection cooled.

Switching Frequency: 100 kHz (Typical).

Dielectric Withstand Voltage:

	Inputs to 75 Vdc	110-350 Vdc input	Isolation
Input to output:	2828 Vdc	4242 Vdc	707 Vdc
Input to case:	2828 Vdc	2121 Vdc	707 Vdc
Output to case:	750 Vdc	750 Vdc	424 Vdc

Drawings: See page 32.

Mounting: Threaded mounting holes permit mounting to a chassis, cabinet wall or bracket. To mount from the power supply side of the mounting surface or for DIN rail mounting, see accessory Mounting Kits on page 33.



Narrow Profile DC-DC CONVERTERS

Nominal Output Voltage	Adjust Range ±V	Output Current Amps. at		Ripple mV (@ 25 MHz BW)		Case Size	18 to 36 Vdc Input		36 to 75 Vdc Input		18 to 75 Vdc Input		110 to 350 Vdc Input *	
		40°C	71°C	RMS	P-P		Price (\$)	Model	Price (\$)	Model	Price (\$)	Model	Price (\$)	Model
3.3	.5	10	7	10	50	DN6B	185	24C3.3FT1000	185	48C3.3FT1000	-----	-----	-----	-----
3.3	.5	15	10.5	10	50	DN6A	225	24C3.3FT1500	225	48C3.3FT1500	-----	-----	-----	-----
3.3	.5	18.5	12.9	10	50	DN8A	-----	----->	-----	----->	275	18-75C3.3NT1850	275	230C3.3NT1850
3.3	.5	25	17.5	10	50	DN8	-----	----->	-----	----->	-----	-----	350	230C3.3NT2500
5	.5	10	7	10	50	DN6B	185	24C5FT1000	185	48C5FT1000	-----	-----	-----	*
5	.5	15	10.5	10	50	DN6A	225	24C5FT1500	225	48C5FT1500	-----	-----	-----	-----
5	.5	18.5	12.9	10	50	DN8A	-----	----->	-----	----->	275	18-75C5NT1850	275	230C5NT1850
5	.5	25	17.5	10	50	DN8	-----	----->	-----	----->	-----	-----	350	230C5NT2500
6	.5	8.5	6	10	50	DN6B	185	24C6FT850	185	48C6FT850	-----	-----	-----	*
6	.5	12.5	8.6	10	50	DN6A	225	24C6FT1250	225	48C6FT1250	-----	-----	-----	-----
6	.5	15.4	10.7	10	50	DN8A	-----	----->	-----	----->	275	18-75C6NT1540	275	230C6NT1540
6	.5	24	16.8	10	50	DN8	-----	----->	-----	----->	-----	-----	350	230C6NT2400
7	.5	7	4.9	10	50	DN6B	185	24C7FT700	185	48C7FT700	-----	-----	-----	*
7	.5	10.6	7.4	10	50	DN6A	225	24C7FT1060	225	48C7FT1060	-----	-----	-----	-----
7	.5	15	10.5	10	50	DN8A	-----	----->	-----	----->	275	18-75C7NT1500	275	230C7NT1500
7	.5	23	16.1	10	50	DN8	-----	----->	-----	----->	-----	-----	350	230C7NT2300
8	.5	6	4.2	15	100	DN6B	185	24C8FT600	185	48C8FT600	-----	-----	-----	*
8	.5	9.4	6.6	15	100	DN6A	225	24C8FT940	225	48C8FT940	-----	-----	-----	-----
8	.5	14.7	10.3	15	100	DN8A	-----	----->	-----	----->	275	18-75C8NT1470	275	230C8NT1470
8	.5	23	16.1	15	100	DN8	-----	----->	-----	----->	-----	-----	350	230C8NT2300
9	.5	5.5	3.8	15	100	DN6B	185	24C9FT550	185	48C9FT550	-----	-----	-----	*
9	.5	9.3	6.5	15	100	DN6A	225	24C9FT930	225	48C9FT930	-----	-----	-----	-----
9	.5	14.4	10	15	100	DN8A	-----	----->	-----	----->	275	18-75C9NT1440	275	230C9NT1440
9	.5	23	16.1	15	100	DN8	-----	----->	-----	----->	-----	-----	350	230C9NT2300
10	.5	5	3.5	15	100	DN6B	185	24C10FT500	185	48C10FT500	-----	-----	-----	*
10	.5	9.2	6.4	15	100	DN6A	225	24C10FT920	225	48C10FT920	-----	-----	-----	-----
10	.5	14.1	9.8	15	100	DN8A	-----	----->	-----	----->	275	18-75C10NT1410	275	230C10NT1410
10	.5	22	15.4	15	100	DN8	-----	----->	-----	----->	-----	-----	350	230C10NT2200
12	.5	4.5	3.1	15	100	DN6B	185	24C12FT450	185	48C12FT450	-----	-----	-----	*
12	.5	9.1	6.3	15	100	DN6A	225	24C12FT910	225	48C12FT910	-----	-----	-----	-----
12	.5	13.7	9.6	15	100	DN8A	-----	----->	-----	----->	275	18-75C12NT1370	275	230C12NT1370
12	.5	22	15.4	15	100	DN8	-----	----->	-----	----->	-----	-----	350	230C12NT2200
13	.5	4.3	3	15	100	DN6B	185	24C13FT430	185	48C13FT430	-----	-----	-----	*
13	.5	8.1	5.6	15	100	DN6A	225	24C13FT810	225	48C13FT810	-----	-----	-----	-----
13	.5	12.3	8.6	15	100	DN8A	-----	----->	-----	----->	275	18-75C13NT1230	275	230C13NT1230
13	.5	20	14	15	100	DN8	-----	----->	-----	----->	-----	-----	350	230C13NT2000
14	.5	4.2	3	15	100	DN6B	185	24C14FT420	185	48C14FT420	-----	-----	-----	*
14	.5	7.7	5.4	15	100	DN6A	225	24C14FT770	225	48C14FT770	-----	-----	-----	-----
14	.5	11.7	8.2	15	100	DN8A	-----	----->	-----	----->	275	18-75C14NT1170	275	230C14NT1170
14	.5	19	13.3	15	100	DN8	-----	----->	-----	----->	-----	-----	350	230C14NT1900
15	.5	4	2.8	15	100	DN6B	185	24C15FT400	185	48C15FT400	-----	-----	-----	*
15	.5	7.4	5.2	15	100	DN6A	225	24C15FT740	225	48C15FT740	-----	-----	-----	-----
15	.5	11.1	7.8	15	100	DN8A	-----	----->	-----	----->	275	18-75C15NT1110	275	230C15NT1110
15	.5	18	12.6	15	100	DN8	-----	----->	-----	----->	-----	-----	350	230C15NT1800
18	.5	3.3	2.3	15	100	DN6B	185	24C18FT330	185	48C18FT330	-----	-----	-----	*
18	.5	6	4.2	15	100	DN6A	225	24C18FT600	225	48C18FT600	-----	-----	-----	-----
18	.5	9.2	6.4	15	100	DN8A	-----	----->	-----	----->	275	18-75C18NT920	275	230C18NT920
18	.5	15	10.5	15	100	DN8	-----	----->	-----	----->	-----	-----	350	230C18NT1500
20	.5	3	2.1	15	100	DN6B	185	24C20FT300	185	48C20FT300	-----	-----	-----	*
20	.5	5.6	3.9	15	100	DN6A	225	24C20FT560	225	48C20FT560	-----	-----	-----	-----
20	.5	8.6	6	15	100	DN8A	-----	----->	-----	----->	275	18-75C20NT860	275	230C20NT860
20	.5	14	9.8	15	100	DN8	-----	----->	-----	----->	-----	-----	350	230C20NT1400
24	.5	2.5	1.8	15	100	DN6B	185	24C24FT250	185	48C24FT250	-----	-----	-----	*
24	.5	5	3.5	15	100	DN6A	225	24C24FT500	225	48C24FT500	-----	-----	-----	-----
24	.5	7.5	5.3	15	100	DN8A	-----	----->	-----	----->	275	18-75C24NT750	275	230C24NT750
24	.5	12	8.4	15	100	DN8	-----	----->	-----	----->	-----	-----	350	230C24NT1200
25	.5	2.4	1.6	15	100	DN6B	185	24C25FT240	185	48C25FT240	-----	-----	-----	*
25	.5	4.8	3.3	15	100	DN6A	225	24C25FT480	225	48C25FT480	-----	-----	-----	-----
25	.5	7.2	5	15	100	DN8A	-----	----->	-----	----->	275	18-75C25NT720	275	230C25NT720
25	.5	11.2	7.8	15	100	DN8	-----	----->	-----	----->	-----	-----	350	230C25NT1120
28	.5	2.1	1.5	15	100	DN6B	185	24C28FT210	185	48C28FT210	-----	-----	-----	*
28	.5	4.2	2.9	15	100	DN6A	225	24C28FT420	225	48C28FT420	-----	-----	-----	-----
28	.5	6.2	4.3	15	100	DN8A	-----	----->	-----	----->	275	18-75C28NT620	275	230C28NT620
28	.5	10	7	15	100	DN8	-----	----->	-----	----->	-----	-----	350	230C28NT1000
30	.5	2	1.4	25	150	DN6B	185	24C30FT200	185	48C30FT200	-----	-----	-----	*
30	.5	4	2.8	25	150	DN6A	225	24C30FT400	225	48C30FT400	-----	-----	-----	-----
30	.5	5.6	3.9	25	150	DN8A	-----	----->	-----	----->	275	18-75C30NT560	275	230C30NT560
30	.5	9	6.3	25	150	DN8	-----	----->	-----	----->	-----	-----	350	230C30NT900
32	1	1.9	1.3	25	150	DN6B	185	24C32FT190	185	48C32FT190	-----	-----	-----	*
32	1	3.7	2.5	25	150	DN6A	225	24C32FT370	225	48C32FT370	-----	-----	-----	-----
32	1	5.4	3.7	25	150	DN8A	-----	----->	-----	----->	275	18-75C32NT540	275	230C32NT540
32	1	8.6	6	25	150	DN8	-----	----->	-----	----->	-----	-----	350	230C32NT860
36	1	1.7	1.2	25	150	DN6B	185	24C36FT170	185	48C36FT170	-----	-----	-----	*
36	1	3.3	2.3	25	150	DN6A	225	24C36FT330	225	48C36FT330	-----	-----	-----	-----
36	1	5	3.5	25	150	DN8A	-----	----->	-----	----->	275	18-75C36NT500	275	230C36NT500
36	1	8	5.6	25	150	DN8	-----	----->	-----	----->	-----	-----	350	230C36NT800
40	1	1.5	1	25	150	DN6B	185	24C40FT150	185	48C40FT150	-----	-----	-----	*
40	1	3	2.1	25	150	DN6A	225	24C40FT300	225	48C40FT300	-----	-----	-----	-----
40	1	4.3	3	25	150	DN8A	-----	----->	-----	----->	275	18-75C40NT430	275	230C40NT430
40	1	7	4.9	25	150	DN8	-----	----->	-----	----->	-----	-----	350	230C40NT700
48	1	1.2	.8	25	150	DN6B	185	24C48FT120	185	48C48FT120	-----	-----	-----	*
48	1	2.5	1.7	25	150	DN6A	225	24C48FT250	225	48C48FT250	-----	-----	-----	-----
48	1	3.7	2.6	25	150	DN8A	-----	----->	-----	----->	275	18-75C48NT370	275	230C48NT370
48	1	6	4.2	25	150	DN8	-----	----->	-----	----->	-----	-----	350	230C48NT600

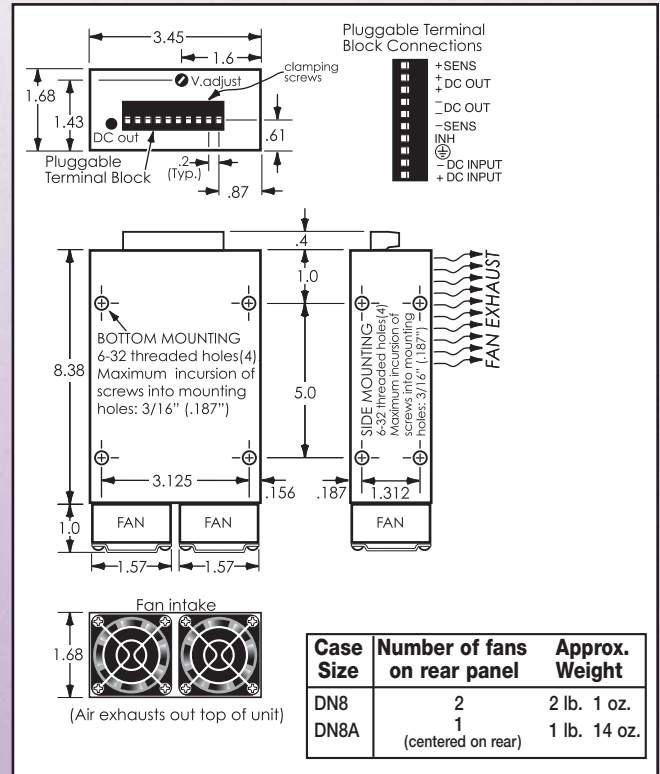
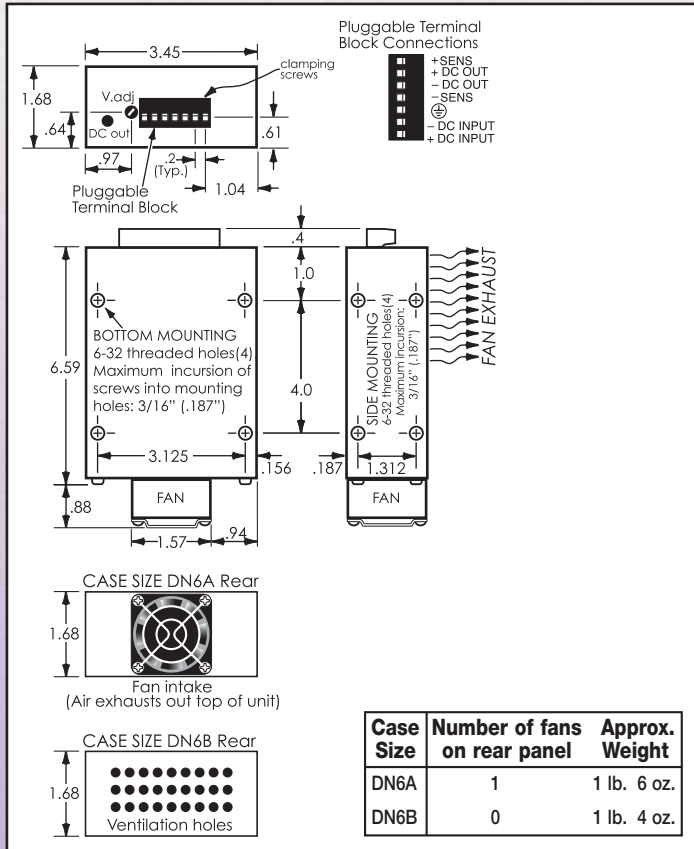
50 to 125

See next page!

* Contact factory for information on Mini Switching Power Supplies that will operate on a 120-180 Vdc input and provide 30 and 50 watt DC outputs.

Narrow Profile DC-DC CONVERTERS (continued)

Nominal Output Voltage	Adjust Range ±V	Output Current Amps. at		Ripple mV (@ 25 MHz BW)		Case Size	18 to 36 Vdc Input		36 to 75 Vdc Input		18 to 75 Vdc Input		110 to 350 Vdc Input	
		40°C	71°C	RMS	P-P		Price (\$)	Model	Price (\$)	Model	Price (\$)	Model	Price (\$)	Model
50	1	3.3	2.3	50	150	DN8A	-----	-----	-----	-----	-----	-----	275	230C50NT330
50	1	5	3.5	50	150	DN8	-----	-----	-----	-----	-----	-----	350	230C50NT500
55	1	3	2.1	50	150	DN8A	-----	-----	-----	-----	-----	-----	275	230C55NT300
55	1	4.5	3.2	50	150	DN8	-----	-----	-----	-----	-----	-----	350	230C55NT450
60	1	2.8	1.9	50	150	DN8A	-----	-----	-----	-----	-----	-----	275	230C60NT280
60	1	4.2	2.9	50	150	DN8	-----	-----	-----	-----	-----	-----	350	230C60NT420
70	1	2.4	1.7	67	200	DN8A	-----	-----	-----	-----	-----	-----	275	230C70NT240
70	1	3.6	2.5	67	200	DN8	-----	-----	-----	-----	-----	-----	350	230C70NT360
75	1	2.2	1.5	67	200	DN8A	-----	-----	-----	-----	-----	-----	275	230C75NT220
75	1	3.3	2.3	67	200	DN8	-----	-----	-----	-----	-----	-----	350	230C75NT330
80	1	2.1	1.4	67	200	DN8A	-----	-----	-----	-----	-----	-----	275	230C80NT210
80	1	3.1	2.2	67	200	DN8	-----	-----	-----	-----	-----	-----	350	230C80NT310
90	1	1.8	1.3	100	300	DN8A	-----	-----	-----	-----	-----	-----	275	230C90NT180
90	1	2.8	1.9	100	300	DN8	-----	-----	-----	-----	-----	-----	350	230C90NT280
100	1	1.7	1.2	150	450	DN8A	-----	-----	-----	-----	-----	-----	275	230C100NT170
100	1	2.5	1.8	150	450	DN8	-----	-----	-----	-----	-----	-----	350	230C100NT250
110	1	1.5	1.1	150	450	DN8A	-----	-----	-----	-----	-----	-----	275	230C110NT150
110	1	2.3	1.6	150	450	DN8	-----	-----	-----	-----	-----	-----	350	230C110NT230
120	1	1.4	1	150	450	DN8A	-----	-----	-----	-----	-----	-----	275	230C120NT140
120	1	2.1	1.5	150	450	DN8	-----	-----	-----	-----	-----	-----	350	230C120NT210
125	1	1.3	0.9	150	450	DN8A	-----	-----	-----	-----	-----	-----	275	230C125NT130
125	1	2	1.4	150	450	DN8	-----	-----	-----	-----	-----	-----	350	230C125NT200



WALL MOUNTING KITS ... \$8

These kits provide a way of mounting power supplies on a wall or panel when the other side of the mounting surface is inaccessible. Each kit consists of four aluminum brackets and four machine screws for fastening them to the power supply, effectively adding mounting flanges to the power supply.

For Gold Box and modular High Voltage power supplies:

GB8 Mounting Kit (#8-32 mounting holes)

Can be used on these case sizes:

CM6, CM9, CM13, CH11, CH16, DG5, DG6, DG9, G3, G5, G5D, G6, G9, G13, GT5, GT6, GT9, GT13, H8, H11, H16, HD345, HD355, HA349, HA359, HT11, HT16, M6, M9, M13, RM6, RW6, TG5, TG6, TG9, TG13, TH11, WG7, WM6, WM9, Y3, Y5, Y6, YH11, YA

For Narrow Profile power supplies:

NP6 Mounting Kit (#6-32 mounting holes)

Can be used on these case sizes:

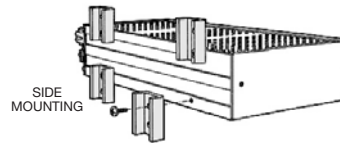
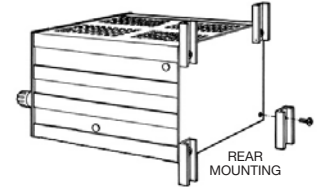
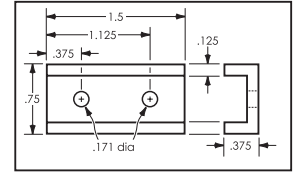
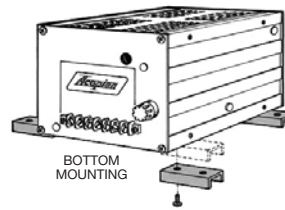
AMC, CN8T, DN6B, DN6A, DN8A, DN8, F6T, F8T, N8T, TN6T, WN6A, WN6B, WN8, WN8A

NP6L Mounting Kit (#6-32 mounting holes)

Model NP6L consists of two brackets 1.5" long as shown above, and two 2.5" long brackets (to extend beyond heat sink).

Can be used on these case sizes:

CN8H, N8H, TN8H

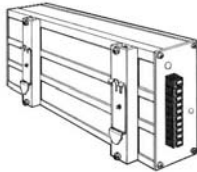


DIN RAIL MOUNTING KITS ... \$15

NPH35DIN Mounting Kit (Horizontal mounting)

Can be used on these case sizes:

CN8H	DN6A	F6T	N8H	TN6T	WN6A
CN8T	DN6B	F8T	N8T	TN8H	WN6B
	DN8				WN8
	DN8A				WN8A

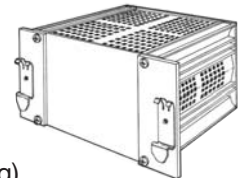


GR35DIN Mounting Kit (Rear mounting)

Can be used on these case sizes:

CM6	DG5	G3	GT5	HD345	M6	RM6	TG5	Y3
CM9	DG6	G5	GT6	HD355	M9	RW6	TG6	Y5
	DG9	G5D	GT9				TG9	Y6
		G6						
		G9						

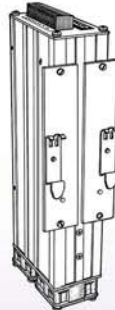
(Can be used, but not recommended, on case sizes: G13, GT13, M13, TG13)



NPV35DIN Mounting Kit (Vertical mounting)

Can be used on these case sizes:

CN8H	DN6A	F6T	N8H	TN6T	WN6A
CN8T	DN6B	F8T	N8T	TN8H	WN6B
	DN8				WN8
	DN8A				WN8A



GH35DIN Mounting Kit (Horizontal mounting)

Can be used on these case sizes:

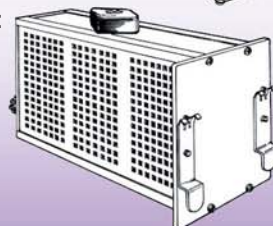
CM6	DG5	G3	GT5	M6	TG5	Y3
CM9	DG6	G5	GT6	M9	TG6	Y5
CM13	DG9	G5D	GT9	M13	TG9	Y6
		G6	GT13			
		G9				
		G13				



NPR35DIN Mounting Kit (Rear mounting)

Can be used on these case sizes:

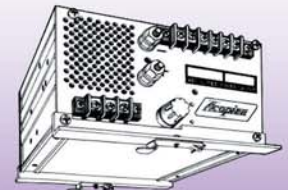
CN8H	F6T	N8H	TN6T
CN8T	F8T	N8T	TN8H



CH35DIN Mounting Kit (Horizontal mounting)

Can be used on these case sizes: RM6, RW6

WH35DIN Mounting Kit (Horizontal mounting) Can be used on these case sizes: WM6, WM9





These Acopian products are shipped within 9 Days



*Wall Mounting
Redundant Power Package*



*Modular Redundant System
(May be mounted on a DIN rail,
wall, chassis or cabinet frame)*



(Meters optional)

*Programmable
Power Supplies with a control voltage*



*High Voltage Power Supplies
To 30,000 Volts*

Five Year Warranty
Made in the U.S.A.



*Customized Redundant Systems
(Built to your requirements)*



We'll build you a Multiple Output Power System meeting your requirements

... and ship it within 9 DAYS!



Five Year Warranty



This system includes test jacks for externally monitoring the voltage and current of each of its six outputs. Handles and chassis slides are provided for extending the system from the rack.



Each of the five power supplies in this system has a separate input switch, and input fuses are on the front panel for easy access. Front panel output adjustments and metering are also included.



What our customers say...



Georgia Tech Research Institute

“Without question, Acopian is reliable. We’ve tried several different brands of power supplies, but sometimes they would just die for no apparent reason. Then, we tried Acopian, and you just can’t kill them – they just last forever. That’s what we need, because we build a lot of support equipment for electronic systems in military tracked vehicles that go out into all sorts of environmental challenges. If Acopian made automobiles, I’d buy one without question.”

David A. Price, Research Technologist (research engineer)

Lawrence Berkeley National Laboratory

“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

Lockheed Martin

“The power supplies we have purchased from Acopian are top quality ... The technical assistance people are really cooperative and knowledgeable.”

Molly Van Gieson, Logistics Specialist

University of Arizona

“Acopian power supplies are very reliable, and your delivery dates can’t be beat.”

Dennis Smith, Engineer

Princeton Scientific Instruments, Inc.

“Given the nature of our work, we don’t have the luxury sometimes of waiting weeks for the delivery of a power supply. This is one of the primary reasons we choose Acopian power supplies because of your rapid response in shipping.”

Scott Kelly, Financial Admin.

Technical Options Inc.

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

Steve Andrews, President

Eta Engineering Consultants, P.S.C.

“I just received a new Acopian catalog and was impressed and pleased with your statement attached to the catalog: ‘When you call Acopian ... a real person will answer your call.’ Thank you very much for this approach. I am also glad to see that some things are still made in the U.S.A.”

Ralph Jackson, P.E., President



Acopian Technical Company

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