Acopian

CE Increasing numbers of Acopian Power Supplies (call for current information) are now available with CE marking **upon request**.

2002

POWER SUPPLY CATALOG

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

POWER SUPPLY SELECTION GUIDE (1 of 2)

HIGH VOLTAGE REGULATED, AC-DC & DC-DC

To 30 KV

Shipped within 6/9 DAYS

0-30 kV
1-60 mA
30-60 watts

DC-DC CONVERTERS, REGULATED

Shipped within 3 DAYS

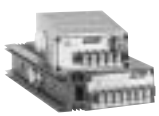
5-28 volts out
0.2-2.5 amps
6-15 watts

LINEAR REGULATED, AC-DC

Shipped within 3 DAYS

1-75 volts
0.02-2.5 amps
0.25-15 watts

Shipped within 3 DAYS



0-150 volts
0.05-3.5 amps
2-38 watts

Shipped within 3 DAYS

0-200 volts
0.1-32 amps
0.6-420 watts

Shipped within 3 DAYS

1-200 volts
0.02-5 amps
0.1-60 watts

Shipped within 9 DAYS

0-150 volts
2.3-60 amps
30-784 watts

POWER SUPPLY SELECTION GUIDE (2 of 2)

REDUNDANT POWER PACKAGES, AC-DC

Shipped within 9 DAYS

SWITCHING REGULATED, AC-DC

Shipped within 6 DAYS

5 - 48 volts
0.65 - 10 amps
30 & 50 watt

Shipped within 9 DAYS

3.3 - 48 volts
8 - 150 amps
325 - 1200 watts

UNREGULATED, AC-DC

Shipped within 3 DAYS

0 - 1000 volts
0.02 - 23 amps
0.8 - 560 watts

Shipped within 3 DAYS

0 - 950 volts
0.02 - 5 amps
7 - 140 watts

POWER SYSTEMS

Shipped within 9 DAYS

ORDERING INFORMATION

High Voltage DC-DC

MODULAR
REGULATED

Output ranges: 0 - 1,000 volts to 0 - 30,000 volts

- Shipped Within 6 Days
- Five Year Warranty

DC inputs from 21.6 to 32.0 volts may be used for these versatile power supplies. Although their outputs are continuously adjustable from 0 to their maximum ratings, 20-turn controls permit precise setability.

These supplies have been designed to withstand severe arcing and short circuits without damage. They are ruggedly constructed with quality components to provide many years of reliable service.

SPECIFICATIONS

Input Voltage: +21.6 to 32.0 Vdc.

Output Polarity: Positive output is standard. For negative output, change first letter of model number from P to N.

Regulation (constant voltage operation):
Line: ±0.05%
Load: ±0.05%

Regulation (constant current operation):
Line: ±0.1%
Load: ±0.1% plus 50 µA.

Ripple: 0.05%, peak-to-peak.

Output Controls: Voltage and current may be controlled by means of two 20-turn front panel adjustments, or by using remotely located 1000 ohm potentiometers.

Output Programming: Output voltage and current may be programmed from 0 to full rating by means of control voltage inputs of 0 to +5.1 Vdc.

Voltage Monitor Terminal: Permits monitoring output voltage, stepped down by ratio shown. Accuracy is 2% of maximum rated output voltage.

Current Monitor Terminal: Permits monitoring output current at mV/mA ratio shown. Accuracy is 2% of maximum rated output current.

Inhibit Terminal: Grounding inhibits output.

Input Protection: "Soft start" circuit minimizes start-up power stresses.

Output Protection: Current regulation circuit protects power supply from short circuits, overload, and arcing.

Efficiency: Greater than 70% at full load.

Response Time: Less than 5 mS for 100 µA load step change.

Stability: 0.05% over eight hours, after 30 minute warmup.

Temperature Coefficient: 200 PPM/°C = 0.02%/°C (Typical).

Ambient Operating Temperature: –10 to +60°C. No derating required.

Storage Temperature: –20 to +85°C.

Humidity: Maximum of 90% relative, non-condensing.

Connections: 24˝ flying lead for high side of output and 5-way binding post for return (ground). All other connections on pluggable terminal block.

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 37.

OPTIONS

Output Connector: Models with an output of 5000 volts or less can be provided with an MHV connector (and 8˝ long detachable shielded output cable with mating MHV connector installed) instead of the flying lead. To order, add suffix letter "T" to the model number and $50.00 to price.

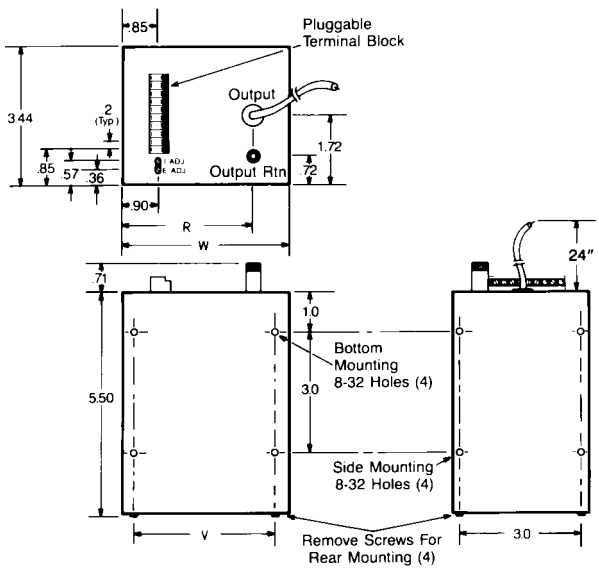
OPTIONAL OUTPUT CONNECTOR

Models with an output of 5000 volts or less can be provided with an MHV connector (and 8´ long detachable output cable with mating MHV connector installed) instead of the flying lead. To order, add suffix letter T to the model number and $50.00 to price.

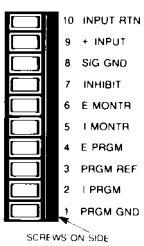
DC-DC MODELS

Output Range kVdc	Output Current mA	Output Monitor Ratio Voltage	Output Monitor Ratio Current mV/mA	($) Price	Model (Positive Output)*	Case Size
0-1	30	1,000:1	100:1	490	P01HD30	HD345
0-1	60	1,000:1	10:1	590	P01HD60	HD355
0-1.5	20	1,000:1	100:1	490	P01.5HD20	HD345
0-1.5	40	1,000:1	100:1	590	P01.5HD40	HD355
0-2	15	1,000:1	100:1	490	P02HD15	HD345
0-2	30	1,000:1	100:1	590	P02HD30	HD355
0-2.5	12	1,000:1	100:1	490	P02.5HD12	HD345
0-2.5	24	1,000:1	100:1	590	P02.5HD24	HD355
0-3.5	8.5	1,000:1	100:1	490	P03.5HD8.5	HD345
0-3.5	17	1,000:1	100:1	590	P03.5HD17	HD355
0-5	6	10,000:1	100:1	550	P05HD6	HD345
0-5	12	10,000:1	100:1	650	P05HD12	HD355
0-7.5	4	10,000:1	100:1	550	P07.5HD4	HD345
0-7.5	8	10,000:1	100:1	650	P07.5HD8	HD355
0-10	3	10,000:1	1,000:1	550	P010HD3	HD345
0-10	6	10,000:1	100:1	650	P010HD6	HD355
0-12	2.5	10,000:1	1,000:1	550	P012HD2.5	HD345
0-12	5	10,000:1	100:1	650	P012HD5	HD355
0-15	2	10,000:1	1,000:1	590	P015HD2	HD345
0-15	4	10,000:1	100:1	690	P015HD4	HD355
0-18	1.6	10,000:1	1,000:1	590	P018HD1.6	HD345
0-18	3.2	10,000:1	1,000:1	690	P018HD3.2	HD355
0-20	1.5	10,000:1	1,000:1	690	P020HD1.5	HD345
0-20	3	10,000:1	1,000:1	790	P020HD3	HD355
0-22	1.3	10,000:1	1,000:1	690	P022HD1.3	HD345
0-22	2.6	10,000:1	1,000:1	790	P022HD2.6	HD355
0-25	1.2	10,000:1	1,000:1	790	P025HD1.2	HD345
0-25	2.4	10,000:1	1,000:1	890	P025HD2.4	HD355
0-30	1	10,000:1	1,000:1	790	P030HD1	HD345
0-30	2	10,000:1	1,000:1	890	P030HD2	HD355

* Positive output is standard. For negative output, change first letter of model number from P to N.



PLUGGABLE TERMINAL BLOCK CONNECTIONS



Case Size	W	V	R	Approx. Weight
HD345	4.13	3.50	3.25	2 lb.
HD355	5.13	4.50	4.25	2 lb. 12 oz.

High Voltage AC-DC

MODULAR
REGULATED

Output ranges: 0 - 1,000 volts to 0 - 30,000 volts

- Shipped Within 6 Days
- Five Year Warranty

These modular High Voltage supplies may be used as constant voltage or constant current sources. They may be remotely programmed by means of either voltage or resistance, and have provisions for remote monitoring and output inhibiting. All control and monitoring connections are on a pluggable terminal block that functions as a connector, providing wiring convenience and permitting easy and rapid connect/disconnect. Outputs are arc/short circuit protected.

SPECIFICATIONS

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

Output Polarity: Positive output is standard. For negative output, change first letter of model number from P to N.

Regulation (constant voltage operation):
Line: ±0.05%
Load: ±0.05%

Regulation (constant current operation):
Line: ±0.1%
Load: ±0.1% plus 50 µA.

Ripple: 0.05%, peak-to-peak.

Output Controls: Voltage and current may be controlled by means of two 20-turn front panel adjustments, or by using remotely located 1000 ohm potentiometers.

Output Programming: Output voltage and current may be programmed from 0 to full rating by means of control voltage inputs of 0 to +5.1 Vdc.

Voltage Monitor Terminal: Permits monitoring output voltage, stepped down by ratio shown. Accuracy is 2% of maximum rated output voltage.

Current Monitor Terminal: Permits monitoring output current at mV/mA ratio shown. Accuracy is 2% of maximum rated output current.

Inhibit Terminal: Grounding inhibits output.

Input Protection: "Soft start" circuit minimizes start-up power stresses.

Output Protection: Current regulation circuit protects power supply from short circuits, overload, and arcing.

Efficiency: Greater than 70% at full load.

Response Time: Less than 5 mS for 100 µA load step change.

Stability: 0.05% over eight hours, after 30 minute warmup.

Temperature Coefficient: 200 PPM/°C = 0.02%/°C (Typical).

Ambient Operating Temperature: –10 to +60°C. No derating required.

Storage Temperature: –20 to +85°C.

Humidity: Maximum of 90% relative, non-condensing.

Connections: 24˝ flying lead for high side of output and 5-way binding post for return (ground) are at the rear. AC input connections on separate terminal strip. All other connections on pluggable terminal block.

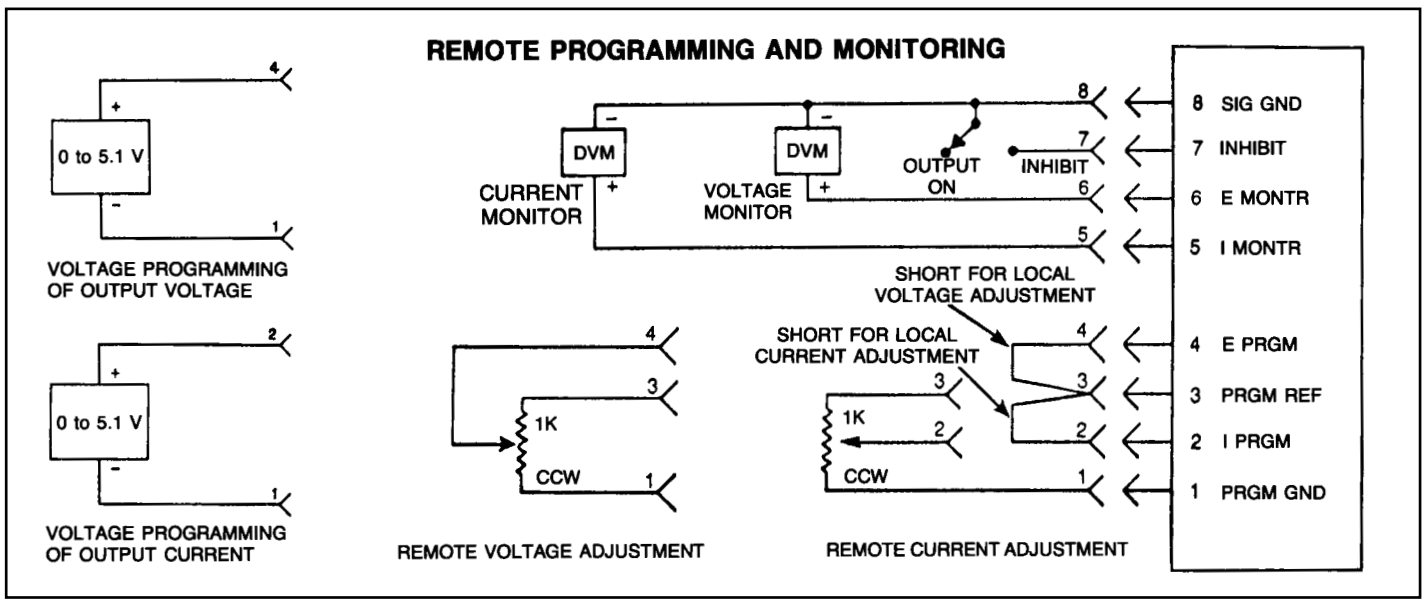
Mounting: Threaded mounting holes permit mounting to a chassis, cabinet wall or bracket, or they may be used on a test bench or tabletop. To mount from the power supply side of the mounting surface, see accessory Mounting Kit GB8 on page 37.

OPTIONS

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

Output Connector: Models with an output of 5000 volts or less can be provided with an MHV connector (and 8´ long detachable shielded output cable with mating MHV connector installed) instead of the flying lead. To order, add suffix letter "T" to the model number and $50.00 to price.

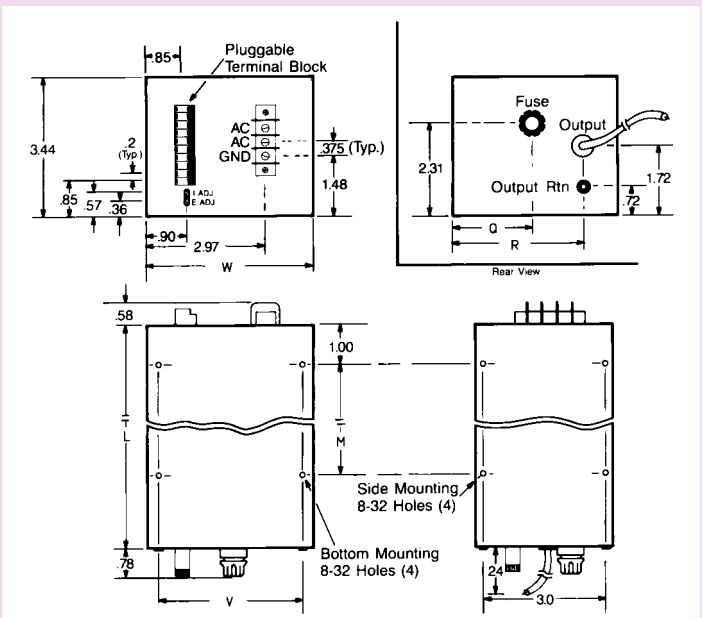
230 Volt Input: For operation on inputs of 210-250 VAC, 50-400 Hz, single phase. To order, add suffix "–230" to model number and $40.00 to price. The "–230" option requires two additional days.



AC-DC MODELS

Output Range kVdc	Output Current mA	Output Monitor Ratio Voltage	Output Monitor Ratio Current mV/mA	($) Price	Model (Positive Output)*	Case Size
0-1	30	1,000:1	100:1	590	P01HA30	HA349
0-1	60	1,000:1	10:1	690	P01HA60	HA359
0-1.5	20	1,000:1	100:1	590	P01.5HA20	HA349
0-1.5	40	1,000:1	100:1	690	P01.5HA40	HA359
0-2	15	1,000:1	100:1	590	P02HA15	HA349
0-2	30	1,000:1	100:1	690	P02HA30	HA359
0-2.5	12	1,000:1	100:1	590	P02.5HA12	HA349
0-2.5	24	1,000:1	100:1	690	P02.5HA24	HA359
0-3.5	8.5	1,000:1	100:1	590	P03.5HA8.5	HA349
0-3.5	17	1,000:1	100:1	690	P03.5HA17	HA359
0-5	6	10,000:1	100:1	650	P05HA6	HA349
0-5	12	10,000:1	100:1	750	P05HA12	HA359
0-7.5	4	10,000:1	100:1	650	P07.5HA4	HA349
0-7.5	8	10,000:1	100:1	750	P07.5HA8	HA359
0-10	3	10,000:1	1,000:1	650	P010HA3	HA349
0-10	6	10,000:1	100:1	750	P010HA6	HA359
0-12	2.5	10,000:1	1,000:1	650	P012HA2.5	HA349
0-12	5	10,000:1	100:1	750	P012HA5	HA359
0-15	2	10,000:1	1,000:1	690	P015HA2	HA349
0-15	4	10,000:1	100:1	790	P015HA4	HA359
0-18	1.6	10,000:1	1,000:1	690	P018HA1.6	HA349
0-18	3.2	10,000:1	1,000:1	790	P018HA3.2	HA359
0-20	1.5	10,000:1	1,000:1	790	P020HA1.5	HA349
0-20	3	10,000:1	1,000:1	890	P020HA3	HA359
0-22	1.3	10,000:1	1,000:1	790	P022HA1.3	HA349
0-22	2.6	10,000:1	1,000:1	890	P022HA2.6	HA359
0-25	1.2	10,000:1	1,000:1	890	P025HA1.2	HA349
0-25	2.4	10,000:1	1,000:1	990	P025HA2.4	HA359
0-30	1	10,000:1	1,000:1	890	P030HA1	HA349
0-30	2	10,000:1	1,000:1	990	P030HA2	HA359

* Positive output is standard. For negative output, change first letter of model number from P to N.



Case Size	L	W	M	V	Q	R	Approx. Weight
HA349	8.82	4.13	6.00	3.50	2.00	3.25	6 lb. 8 oz.
HA359	9.33	5.13	7.00	4.50	2.78	4.25	10 lb.

High Voltage AC-DC

RACK MOUNTING
REGULATED

Output ranges: 0 - 1,000 volts to 0 - 30,000 volts

- Shipped Within 9 Days
- Five Year Warranty

Ideal for laboratory and instrumentation applications, these rack mounting supplies have the same output ratings and specifications as the modular supplies shown on pages 4 and 5, but additionally feature calibrated ten-turn controls (with locking vernier dials) for precisely setting voltage and current. Voltmeter, ammeter and handles are standard. An 8´ long shielded output cable is included.

SPECIFICATIONS

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

Input Current:
30 watt output ratings: 0.6A
60 watt output ratings: 1.2A

Output Polarity: Positive output is standard. For negative output, change first letter of model number from P to N.

Regulation (constant voltage operation):
Line: ±0.05%
Load: ±0.05%

Regulation (constant current operation):
Line: ±0.1%
Load: ±0.1% plus 50 µA.

Ripple: 0.05%, peak-to-peak.

Output Controls: Voltage and current may be controlled by means of two 10-turn front panel adjustments with locking vernier dials. Control linearity is 1% of full rated output. Calibration accuracy is 1% of rated output plus 1% of setting. (Remotely located 1000 ohm potentiometers may alternately be used for output control.)

Metering: Voltmeter and ammeter are standard. Accuracy is 2% of full scale.

Voltage Monitor Terminal: Permits remote monitoring of output voltage, stepped down by ratio shown. Accuracy is 2% of maximum rated output voltage.

Current Monitor Terminal: Permits remote monitoring of output current, at mV/mA ratio shown. Accuracy is 2% of maximum rated output current.

Inhibit Terminal: Grounding inhibits output.

Input Protection: "Soft start" circuit minimizes start-up power stresses.

Output Programming: Output voltage and current may be programmed from 0 to full rating by means of control voltage inputs of 0 to +5.1 Vdc, ±2%.

Output Protection: Current regulation circuit protects power supply from short circuits, overload, and arcing.

Response Time: Less than 5 mS for 100 µA load step change.

Stability: 0.05% over eight hours, after 30 minute warmup.

Temperature Coefficient: 200 PPM/°C = 0.02%/°C (Typical).

Ambient Operating Temperature: –10 to +60°C. No derating required.

Storage Temperature: –20 to +85°C.

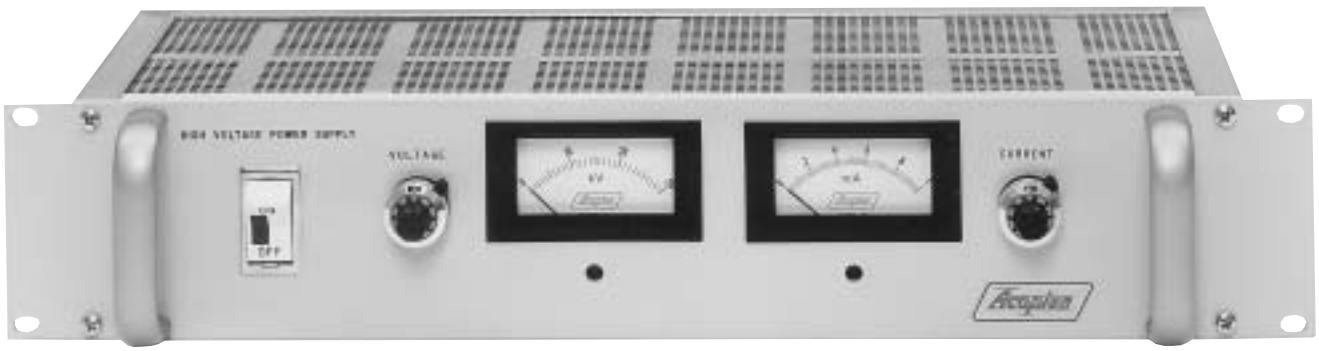
Humidity: Maximum of 90% relative, non-condensing.

Connections:
Input, Control and Monitoring: Screw terminals.
Output: High voltage connector (Type varies with model number). An 8´ shielded output cable, with mating connector installed, is provided.

OPTIONS

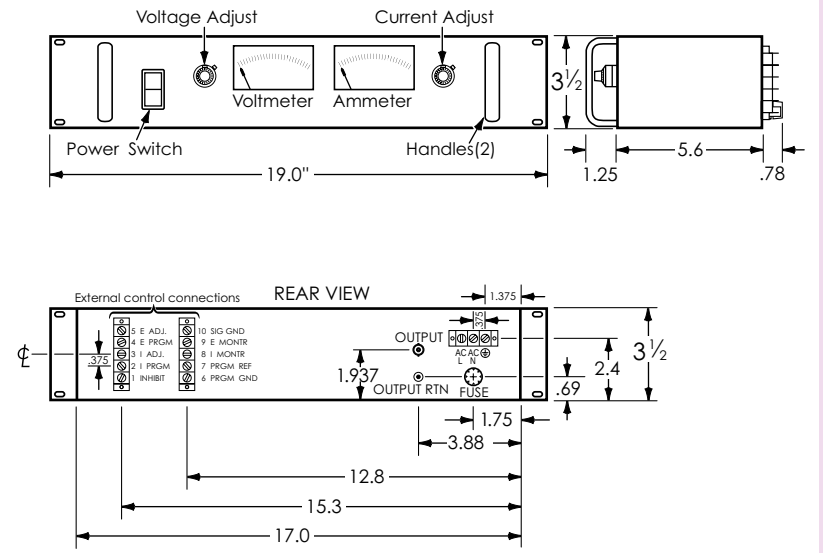
Terminal Strip Cover: Clips on AC input terminal strip. To order, add suffix "M" to model number and $5.00 to price.

230 Volt Input: All models can be alternately furnished for operation on inputs of 210-250 VAC, 50-400 Hz, single phase. To order, add suffix "–230" to model number and add $40.00 to price. The "–230" option requires two additional days.



Output Range kVdc	Output Current mA	Output Monitor Ratio Voltage	Output Monitor Ratio Current mV/mA	($) Price	Model (Positive Output)*
0-1	30	1,000:1	100:1	995	P01HP30
0-1	60	1,000:1	10:1	1095	P01HP60
0-1.5	20	1,000:1	100:1	1095	P01.5HP20
0-1.5	40	1,000:1	100:1	1195	P01.5HP40
0-2	15	1,000:1	100:1	995	P02HP15
0-2	30	1,000:1	100:1	1095	P02HP30
0-2.5	12	1,000:1	100:1	995	P02.5HP12
0-2.5	24	1,000:1	100:1	1095	P02.5HP24
0-3.5	8.5	1,000:1	100:1	995	P03.5HP8.5
0-3.5	17	1,000:1	100:1	1095	P03.5HP17
0-5	6	10,000:1	100:1	1050	P05HP6
0-5	12	10,000:1	100:1	1150	P05HP12
0-7.5	4	10,000:1	100:1	1050	P07.5HP4
0-7.5	8	10,000:1	100:1	1150	P07.5HP8
0-10	3	10,000:1	1,000:1	1050	P010HP3
0-10	6	10,000:1	100:1	1150	P010HP6
0-12	2.5	10,000:1	1,000:1	1050	P012HP2.5
0-12	5	10,000:1	100:1	1150	P012HP5
0-15	2	10,000:1	1,000:1	1095	P015HP2
0-15	4	10,000:1	100:1	1195	P015HP4
0-18	1.6	10,000:1	1,000:1	1095	P018HP1.6
0-18	3.2	10,000:1	1,000:1	1195	P018HP3.2
0-20	1.5	10,000:1	1,000:1	1095	P020HP1.5
0-20	3	10,000:1	1,000:1	1195	P020HP3
0-22	1.3	10,000:1	1,000:1	1150	P022HP1.3
0-22	2.6	10,000:1	1,000:1	1250	P022HP2.6
0-25	1.2	10,000:1	1,000:1	1195	P025HP1.2
0-25	2.4	10,000:1	1,000:1	1295	P025HP2.4
0-30	1	10,000:1	1,000:1	1195	P030HP1
0-30	2	10,000:1	1,000:1	1295	P030HP2

***** Positive output is standard. For negative output, change first letter of model number from P to N.

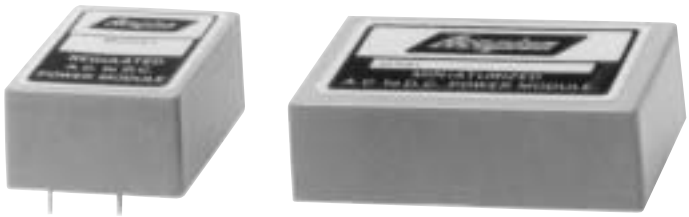


Case Size HP36
Approx. Weight: 10 lb. 2 oz. to 13 lb. 13 oz.

single output

Miniaturized - 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. Mini-modules are also available with multiple outputs - see pages 10 and 11.

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 ±2% (1 to 9 volt models) or ±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°C. No derating required.

Storage Temperature: –55 to +85°C.

Temperature Coefficient: From 9 to 75 volts, typically 0.015%/°C; 1 to 8 volts, 0.03%/°C.

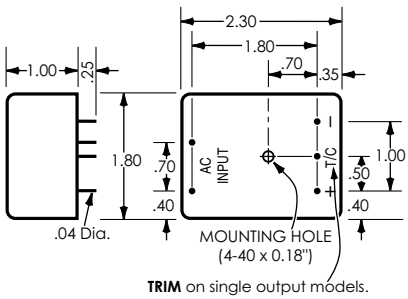
Impedance: 0.07 ohms at 1 kHz and 0.2 ohms at 10 kHz (approx.).

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)

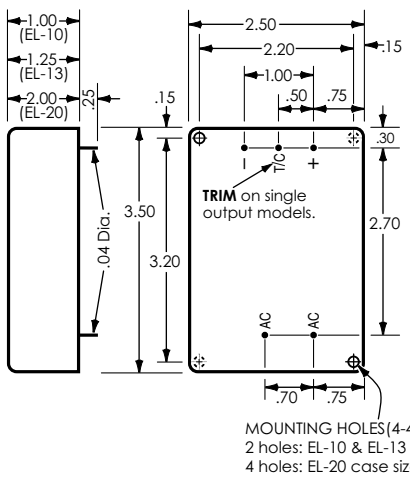
Mounting: May be mounted on printed circuit board or in socket (see page 11).

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.



Case Size ES-10



Case Sizes EL-10, EL-13, and EL-20

SINGLE OUTPUT, FOR PC BOARD MOUNTING (continued)

(For Miniaturized power supplies with higher wattage outputs than those shown below, see pages 14-15.)

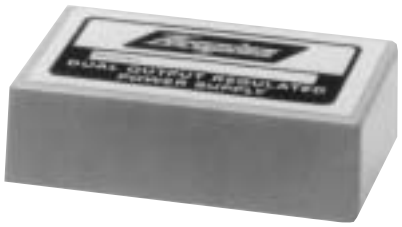
Nominal Output Voltage	Output Current Amps.	Regulation Load ±%	Regulation Line ±%	Ripple mV RMS	($) Price	Model	Case Size
1	.250	.1	.05	0.5	59	1E25	ES-10
1	.500	.2	.05	1	75	1E50A	EL-10
1.5	.250	.1	.05	0.5	59	1.5E25	ES-10
1.5	.500	.2	.05	1	75	1.5E50A	EL-10
1.5	1.0	.3	.05	1	98	1.5E100	EL-13
1.5	2.5	.3	.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 Load ±%	Regulation Line ±%	Ripple mV RMS	($) Price	Model	Case Size
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 & triple outputs

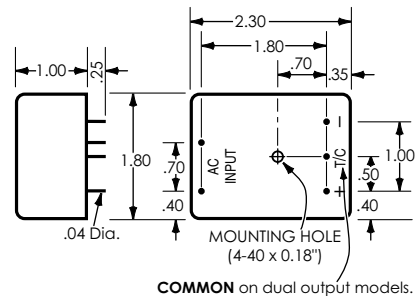
Miniaturized - PC Board mounting

LINEAR REGULATED
AC-DC

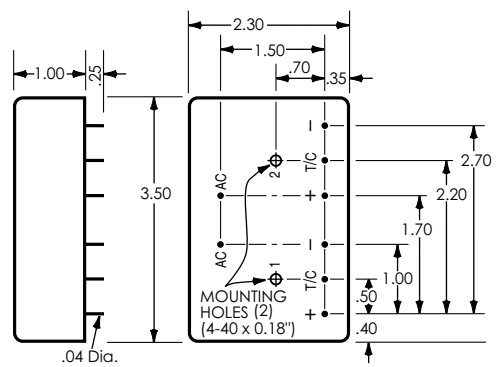


- Shipped Within 3 Days
- All Models U.L. Recognized
- One Year Warranty

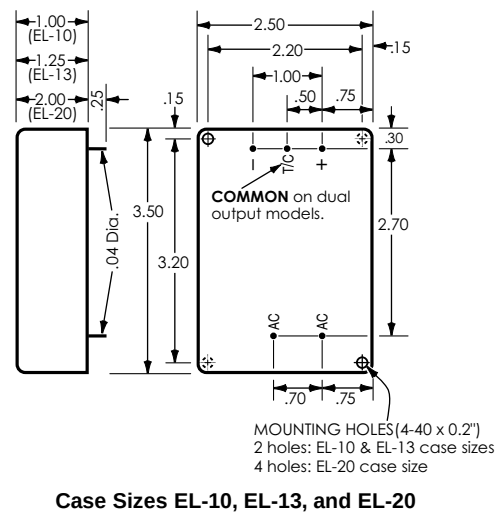
These dual and triple output mini-modules are compact and convenient sources of the voltages required to power operational amplifiers and related circuits. They may be mounted directly on printed circuit board assemblies, simplifying system layout and minimizing the connectors and wiring required.



Case Size ES-10



Case Size END



Case Sizes EL-10, EL-13, and EL-20

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 ±2% (1 to 9 volt outputs) or ±1% (10 to 28 volt outputs) of the nominal output voltage.

T/C terminal: For case sizes ES-10, EL-10, EL-13, EL-20, and END sections marked (*), the T/C terminal is the output common. For case size END sections, except those marked (*), 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: Single output sections may be used in either polarity. Dual output sections, marked (*), are provided with a positive/common/negative output connection configuration.

Ambient Operating Temperature: –20 to +71°C. No derating required.

Storage Temperature: –55 to +85°C.

Temperature Coefficient: From 9 to 28 volts, typically 0.015%/°C; 1 to 8 volts, 0.03%/°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 END and EL-10)
1 lb. 3 oz. (Case size EL-13)
1 lb. 15 oz. (Case size EL-20)

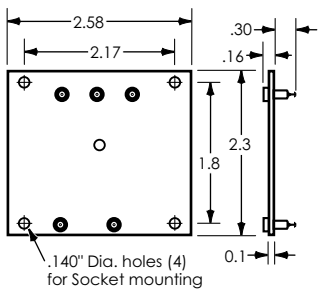
Mounting: May be mounted on printed circuit board or in socket (see page 11).

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.

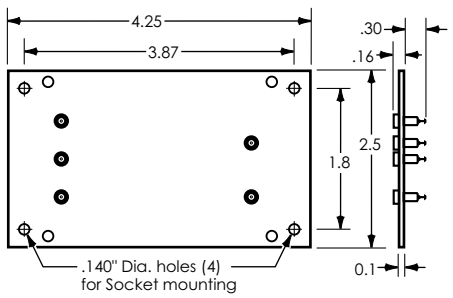
ACCESSORY SOCKETS

For use with PC board mounting Miniaturized Linears and PC board mounting DC-DC Converters. Each of these sockets has a sturdy phenolic base with gold plated teflon-insulated contacts.



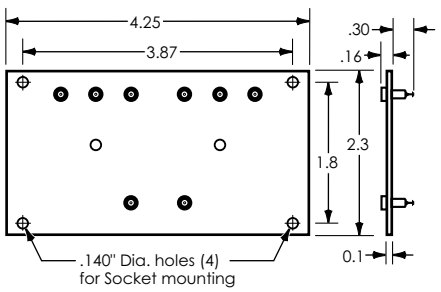
(for case sizes ES-10 and ESC-10)

Model ES-1.....$15



(for case sizes EL-10, EL-13, EL-20 and ELC-10)

Model EL-1.....$15



(for case size END)

Model END-1.....$20

DUAL TRACKING OUTPUTS

(These model numbers are complete as shown.)

Nominal Output Voltages	Amps. per Output	Regulation Load ± %	Regulation Line ± %	Ripple mV RMS	($) Price	Model	Case Size
±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

Nominal Output Voltages	Amps. per Output	Regulation Load ± %	Regulation Line ± %	Ripple mV RMS	($) Price	Model	Case Size
±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

DUAL ISOLATED & TRIPLE OUTPUTS, (User-selectable)

How to Order:

Select two **sections** from those listed below. The complete model number is the combination of the two **section** numbers selected. (*Note that some **sections** provide two outputs; combination with a single output **section** results in a triple-output module.)

Example: The combination of sections 6E20D and 15E10D is the Model 6E20D-15E10D. Always assign the lower voltage section first. (Two of the same section can also be selected.) For pricing purposes, add the costs of the individual sections selected. Example: The price of the Model 6E20D-15E10D is $97.00 total ($52.00 plus $45.00).

Nominal Output Voltage	Output Current Amps.	Regulation Load ± %	Regulation Line ± %	Ripple mV RMS	(see 'How to Order') Price per Section ($)	(see 'How to Order') Section	Case Size
1	.250	.1	.05	0.5	52	1E25D	END
1.5	.250	.1	.05	0.5	52	1.5E25D	END
2	.200	.1	.05	0.5	52	2E20D	END
3	.250	.1	.05	0.5	52	3E25D	END
3.3	.250	.05	.05	0.5	52	3.3E25D	END
4	.200	.05	.05	0.5	52	4E20D	END
5	.250	.05	.05	0.5	52	5E25D	END
6	.200	.05	.05	0.5	52	6E20D	END
7	.170	.05	.05	0.5	52	7E17D	END
8	.150	.05	.05	0.5	52	8E15D	END
9	.130	.05	.05	0.5	45	9E13D	END
10	.120	.02	.02	0.5	45	10E12D	END
±12*	.050	.10	.05	1	52	D12E05	END
12	.100	.02	.02	0.5	45	12E10D	END
12	.150	.05	.05	0.5	55	12E15D	END
13	.100	.02	.02	0.5	45	13E10D	END

Nominal Output Voltage	Output Current Amps.	Regulation Load ± %	Regulation Line ± %	Ripple mV RMS	(see 'How to Order') Price per Section ($)	(see 'How to Order') Section	Case Size
14	.100	.02	.02	0.5	45	14E10D	END
±15*	.050	.10	.05	1	52	D15E05	END
15	.100	.02	.02	0.5	45	15E10D	END
15	.150	.05	.05	0.5	55	15E15D	END
16	.080	.02	.02	0.5	45	16E08D	END
17	.070	.02	.02	0.5	45	17E07D	END
18	.060	.02	.02	0.5	45	18E06D	END
20	.060	.02	.02	0.5	45	20E06D	END
21	.060	.02	.02	0.5	45	21E06D	END
22	.050	.02	.02	0.5	45	22E05D	END
23	.050	.02	.02	0.5	45	23E05D	END
24	.050	.02	.02	0.5	45	24E05D	END
25	.050	.02	.02	0.5	45	25E05D	END
26	.040	.02	.02	0.5	45	26E04D	END
27	.040	.02	.02	0.5	45	27E04D	END
28	.040	.02	.02	0.5	45	28E04D	END

*Dual output section. Combination with a single output section results in a triple output module.

single & dual tracking outputs

Miniaturized - 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 ±2% (1 to 9 volt models) or ±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°C. No derating required.

Storage Temperature: –55 to +85°C.

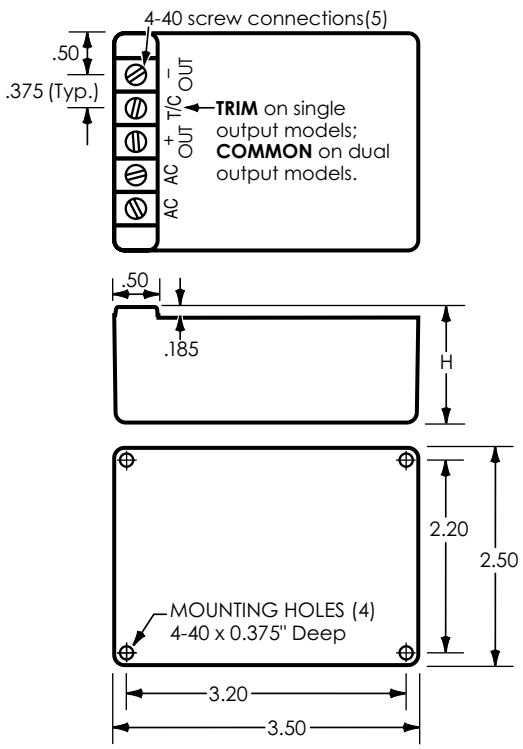
Temperature Coefficient: From 9 to 75 volts, typically 0.015%/°C; 1 to 8 volts, 0.03%/°C.

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 19.

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 (continued)

(For Miniaturized power supplies with higher wattage outputs than those shown below, see pages 14-15.)

Nominal Output Voltage	Output Current Amps.	Regulation Load ±%	Regulation Line ±%	Ripple mV RMS	($) Price	Model	Case Size
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 Load ±%	Regulation Line ±%	Ripple mV RMS	($) Price	Model	Case Size
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 Load ±%	Regulation Line ±%	Ripple mV RMS	($) Price	Model	Case Size
±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 Load ±%	Regulation Line ±%	Ripple mV RMS	($) Price	Model	Case Size
±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

single output

Miniaturized - PC Board mounting
or
- with screw terminals

SWITCHING REGULATED
DC output (accepts either AC or DC input)

- Shipped Within 6 Days
- One Year Warranty

These versatile power supplies mount in a surface area of only 3.5˝ x 2.5˝, and are available in a choice of mounting styles. They have a high efficiency and may be operated through a wide temperature range.

A common-mode input filter reduces conducted noise, and the shielded case minimizes radiated energy. Their outputs may be used in either polarity, and may be precisely trimmed.

STANDARD FEATURES

- Compact, lightweight, fully encapsulated
- Short circuit and overload protected
- No heat sinking or forced air required
- Input/output isolation
- Extensive EMI filtering and shielding

SPECIFICATIONS

Input Voltage: 85-130 VAC, 47-420 Hz, single phase, or 120-180 Vdc. DC input may be connected without regard to polarity.

Output Voltage Setting: Output is factory preset to within ±2% (5 to 9 volt models) or ±1% (10 to 48 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.

Regulation:
Load: ±0.05% (5 and 6 volt "WL" models, ±0.1%)
Line: ±0.05%

Ambient Operating Temperature: –10 to +71°C.
No derating required through +50°C.

Storage Temperature: –40 to +85°C.

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

Humidity: Maximum of 90% relative, non-condensing.

Overload/Short Circuit Protection: Power foldback with automatic recovery.

Isolation:
Input to output: 1400 Vdc
Input to ground: 1400 Vdc
Output to ground: 400 Vdc

Efficiency: 76% (Typical).

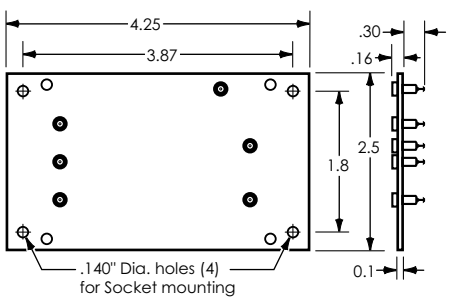
Switching Frequency: 225 kHz (Typical).

Transient Response: Returns to within ±1% of output setting within 300 µS. Maximum of ±3% output excursion following a load step change from 50% to 100% of rating.

Holdup Time: 33 mS (Typical, at nominal input voltage with full load).

Mounting: Models for PC Board mounting may also be mounted in the socket shown below. For models with screw terminals, when wall-mounting or DIN rail mounting is desired, use accessory Mounting Kits on page 19.

ACCESSORY SOCKET



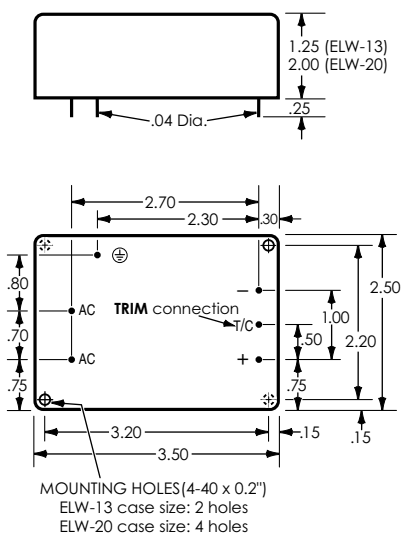
Accepts power supplies in case sizes ELW-13 and ELW-20. Sturdy phenolic base with gold plated teflon-insulated contacts.

Model ELW-1 .....$15

FOR PC BOARD MOUNTING

Nominal Output Voltage	Output Current Amps. at 50°C	Output Current Amps. at 71°C	Ripple mV (@ 25 MHz BW) RMS	Ripple mV (@ 25 MHz BW) P-P	($) Price	Model	Case Size
5	6.00	3.60	10	50	175	5WL600	ELW-13
5	10.00	6.00	10	50	200	5WL1000	ELW-20
6	5.00	3.00	10	50	175	6WL500	ELW-13
6	8.30	4.95	10	50	200	6WL830	ELW-20
7	4.20	2.50	15	100	175	7WL420	ELW-13
7	7.10	4.26	15	100	200	7WL710	ELW-20
8	3.70	2.20	15	100	175	8WL370	ELW-13
8	6.20	3.70	15	100	200	8WL620	ELW-20
9	3.30	2.00	15	100	175	9WL330	ELW-13
9	5.50	3.30	15	100	200	9WL550	ELW-20
10	3.00	1.80	15	100	175	10WL300	ELW-13
10	5.00	3.00	15	100	200	10WL500	ELW-20
11	2.70	1.60	15	100	175	11WL270	ELW-13
11	4.50	2.70	15	100	200	11WL450	ELW-20
12	2.50	1.50	15	100	175	12WL250	ELW-13
12	4.10	2.45	15	100	200	12WL410	ELW-20
13	2.30	1.38	15	100	175	13WL230	ELW-13
13	3.80	2.25	15	100	200	13WL380	ELW-20
14	2.10	1.25	15	100	175	14WL210	ELW-13
14	3.50	2.10	15	100	200	14WL350	ELW-20
15	2.00	1.20	15	100	175	15WL200	ELW-13
15	3.30	1.95	15	100	200	15WL330	ELW-20
16	1.85	1.10	15	100	175	16WL185	ELW-13
16	3.10	1.85	15	100	200	16WL310	ELW-20
17	1.75	1.05	15	100	175	17WL175	ELW-13
17	2.90	1.75	15	100	200	17WL290	ELW-20
18	1.65	1.00	15	100	175	18WL165	ELW-13
18	2.75	1.65	15	100	200	18WL275	ELW-20
19	1.55	.93	15	100	175	19WL155	ELW-13
19	2.60	1.55	15	100	200	19WL260	ELW-20
20	1.50	.90	15	100	175	20WL150	ELW-13
20	2.50	1.50	15	100	200	20WL250	ELW-20
21	1.40	.84	15	100	175	21WL140	ELW-13
21	2.35	1.40	15	100	200	21WL235	ELW-20
22	1.35	.80	15	100	175	22WL135	ELW-13
22	2.25	1.35	15	100	200	22WL225	ELW-20
23	1.30	.78	15	100	175	23WL130	ELW-13
23	2.15	1.30	15	100	200	23WL215	ELW-20
24	1.25	.75	15	100	175	24WL125	ELW-13
24	2.10	1.25	15	100	200	24WL210	ELW-20
25	1.20	.72	15	100	175	25WL120	ELW-13
25	2.00	1.20	15	100	200	25WL200	ELW-20
26	1.15	.70	15	100	175	26WL115	ELW-13
26	1.90	1.15	15	100	200	26WL190	ELW-20
27	1.10	.66	15	100	175	27WL110	ELW-13
27	1.85	1.10	15	100	200	27WL185	ELW-20
28	1.05	.63	15	100	175	28WL105	ELW-13
28	1.75	1.05	15	100	200	28WL175	ELW-20
30	1.00	.60	25	150	175	30WL100	ELW-13
30	1.65	1.00	25	150	200	30WL165	ELW-20
36	.85	.50	25	150	175	36WL85	ELW-13
36	1.35	.80	25	150	200	36WL135	ELW-20
40	.75	.45	25	150	175	40WL75	ELW-13
40	1.25	.75	25	150	200	40WL125	ELW-20
45	.65	.40	25	150	175	45WL65	ELW-13
45	1.10	.65	25	150	200	45WL110	ELW-20
48	.65	.40	25	150	175	48WL65	ELW-13
48	1.05	.60	25	150	200	48WL105	ELW-20

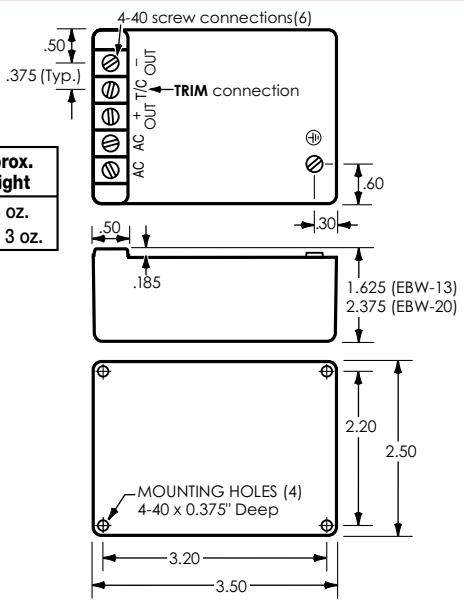
Case Size	Approx. Weight
ELW-13	11 oz.
ELW-20	1 lb. 1 oz.



WITH SCREW TERMINALS

Nominal Output Voltage	Output Current Amps. at 50°C	Output Current Amps. at 71°C	Ripple mV (@ 25 MHz BW) RMS	Ripple mV (@ 25 MHz BW) P-P	($) Price	Model	Case Size
5	6.00	3.60	10	50	180	5WB600	EBW-13
5	10.00	6.00	10	50	205	5WB1000	EBW-20
6	5.00	3.00	10	50	180	6WB500	EBW-13
6	8.30	4.95	10	50	205	6WB830	EBW-20
7	4.20	2.50	15	100	180	7WB420	EBW-13
7	7.10	4.26	15	100	205	7WB710	EBW-20
8	3.70	2.20	15	100	180	8WB370	EBW-13
8	6.20	3.70	15	100	205	8WB620	EBW-20
9	3.30	2.00	15	100	180	9WB330	EBW-13
9	5.50	3.30	15	100	205	9WB550	EBW-20
10	3.00	1.80	15	100	180	10WB300	EBW-13
10	5.00	3.00	15	100	205	10WB500	EBW-20
11	2.70	1.60	15	100	180	11WB270	EBW-13
11	4.50	2.70	15	100	205	11WB450	EBW-20
12	2.50	1.50	15	100	180	12WB250	EBW-13
12	4.10	2.45	15	100	205	12WB410	EBW-20
13	2.30	1.38	15	100	180	13WB230	EBW-13
13	3.80	2.25	15	100	205	13WB380	EBW-20
14	2.10	1.25	15	100	180	14WB210	EBW-13
14	3.50	2.10	15	100	205	14WB350	EBW-20
15	2.00	1.20	15	100	180	15WB200	EBW-13
15	3.30	1.95	15	100	205	15WB330	EBW-20
16	1.85	1.10	15	100	180	16WB185	EBW-13
16	3.10	1.85	15	100	205	16WB310	EBW-20
17	1.75	1.05	15	100	180	17WB175	EBW-13
17	2.90	1.75	15	100	205	17WB290	EBW-20
18	1.65	1.00	15	100	180	18WB165	EBW-13
18	2.75	1.65	15	100	205	18WB275	EBW-20
19	1.55	.93	15	100	180	19WB155	EBW-13
19	2.60	1.55	15	100	205	19WB260	EBW-20
20	1.50	.90	15	100	180	20WB150	EBW-13
20	2.50	1.50	15	100	205	20WB250	EBW-20
21	1.40	.84	15	100	180	21WB140	EBW-13
21	2.35	1.40	15	100	205	21WB235	EBW-20
22	1.35	.80	15	100	180	22WB135	EBW-13
22	2.25	1.35	15	100	205	22WB225	EBW-20
23	1.30	.78	15	100	180	23WB130	EBW-13
23	2.15	1.30	15	100	205	23WB215	EBW-20
24	1.25	.75	15	100	180	24WB125	EBW-13
24	2.10	1.25	15	100	205	24WB210	EBW-20
25	1.20	.72	15	100	180	25WB120	EBW-13
25	2.00	1.20	15	100	205	25WB200	EBW-20
26	1.15	.70	15	100	180	26WB115	EBW-13
26	1.90	1.15	15	100	205	26WB190	EBW-20
27	1.10	.66	15	100	180	27WB110	EBW-13
27	1.85	1.10	15	100	205	27WB185	EBW-20
28	1.05	.63	15	100	180	28WB105	EBW-13
28	1.75	1.05	15	100	205	28WB175	EBW-20
30	1.00	.60	25	150	180	30WB100	EBW-13
30	1.65	1.00	25	150	205	30WB165	EBW-20
36	.85	.50	25	150	180	36WB85	EBW-13
36	1.35	.80	25	150	205	36WB135	EBW-20
40	.75	.45	25	150	180	40WB75	EBW-13
40	1.25	.75	25	150	205	40WB125	EBW-20
45	.65	.40	25	150	180	45WB65	EBW-13
45	1.10	.65	25	150	205	45WB110	EBW-20
48	.65	.40	25	150	180	48WB65	EBW-13
48	1.05	.60	25	150	205	48WB105	EBW-20

Case Size	Approx. Weight
EBW-13	13 oz.
EBW-20	1 lb. 3 oz.



DC-DC Converters

Miniaturized **- 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 page 18.

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 ±10%.

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

Output Regulation:
Line: ±0.02%
Load: ±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 ±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.

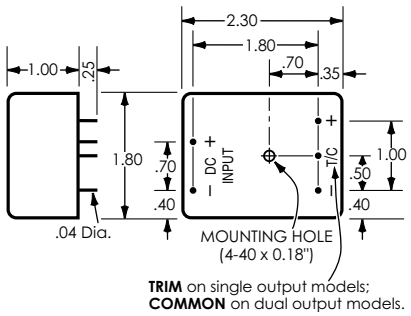
Temperature Coefficient: 0.02%/°C (Typical).

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

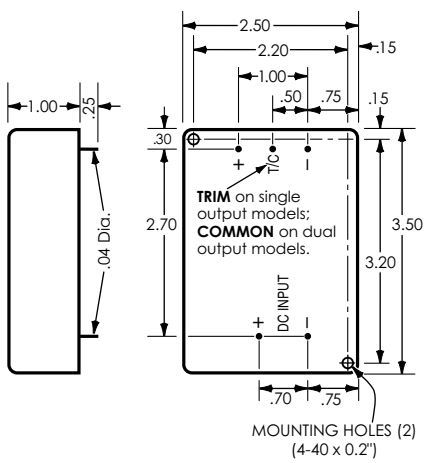
Storage Temperature: –40 to +85°C.

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

Mounting: May be mounted on printed circuit board or in socket (see page 11).



Case Size ESC-10
Approx. Weight: 5 oz.



Case Size ELC-10
Approx. Weight: 12 oz.

SINGLE OUTPUT

Nominal Input Voltage	Nominal Output Voltage	Output Current Amps. at 40°C	55°C	71°C	($) Price	Model	Case Size
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
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	6	1.00	1.00	.80	98	48E6E100	ESC-10
48	8	.75	.75	.60	98	48E8E75	ESC-10
48	9	.70	.70	.55	98	48E9E70	ESC-10
48	10	.65	.65	.50	98	48E10E65	ESC-10
48	12	.60	.60	.50	98	48E12E60	ESC-10
48	13	.55	.55	.45	98	48E13E55	ESC-10
48	15	.50	.50	.40	98	48E15E50	ESC-10
48	18	.40	.40	.30	98	48E18E40	ESC-10
48	20	.35	.35	.28	98	48E20E35	ESC-10
48	24	.25	.25	.20	98	48E24E25	ESC-10
48	28	.25	.25	.20	98	48E28E25	ESC-10
120 to 180	See pages 14-15.						

DUAL TRACKING OUTPUTS

Nominal Input Voltage	Nominal Output Voltages	Amps. per Output at 40°C	55°C	71°C	($) Price	Model	Case Size
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	125	15E12D60	ELC-10
15	±15	.25	.25	.25	105	15E15D25	ESC-10
15	±15	.50	.45	.40	125	15E15D50	ELC-10
15	±18	.20	.20	.20	105	15E18D20	ESC-10
15	±18	.40	.35	.30	125	15E18D40	ELC-10
24	±10	.30	.30	.25	105	24E10D30	ESC-10
24	±10	.60	.55	.50	125	24E10D60	ELC-10
24	±12	.30	.30	.25	105	24E12D30	ESC-10
24	±12	.60	.55	.50	125	24E12D60	ELC-10
24	±15	.25	.25	.25	105	24E15D25	ESC-10
24	±15	.50	.45	.40	125	24E15D50	ELC-10
24	±18	.20	.20	.20	105	24E18D20	ESC-10
24	±18	.40	.35	.30	125	24E18D40	ELC-10
28	±10	.30	.30	.25	105	28E10D30	ESC-10
28	±10	.60	.55	.50	125	28E10D60	ELC-10
28	±12	.30	.30	.25	105	28E12D30	ESC-10
28	±12	.60	.55	.50	125	28E12D60	ELC-10
28	±15	.25	.25	.25	105	28E15D25	ESC-10
28	±15	.50	.45	.40	125	28E15D50	ELC-10
28	±18	.20	.20	.20	105	28E18D20	ESC-10
28	±18	.40	.35	.30	125	28E18D40	ELC-10
48	±10	.30	.30	.25	105	48E10D30	ESC-10
48	±12	.30	.30	.25	105	48E12D30	ESC-10
48	±15	.25	.25	.25	105	48E15D25	ESC-10
48	±18	.20	.20	.20	105	48E18D20	ESC-10

DC-DC Converters

Miniaturized - **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 ±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 ±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%/°C (Typical).

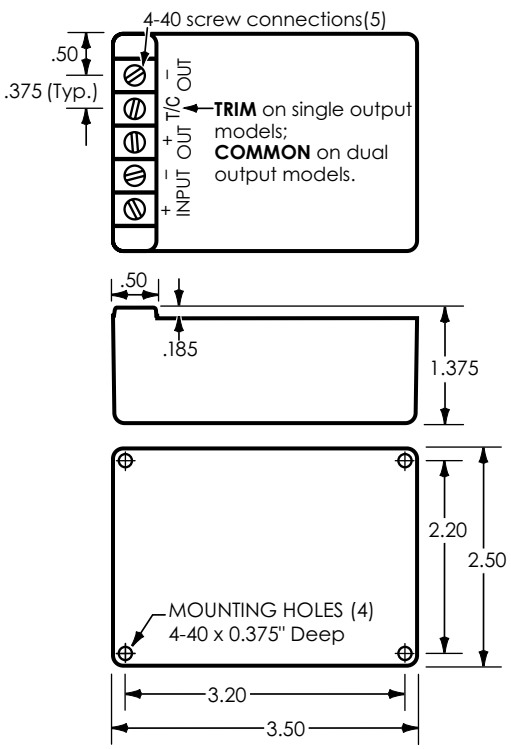
Ambient Operating Temperature: –20 to +71°C.

Storage Temperature: –40 to +85°C.

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

Case Size: EBC-10.

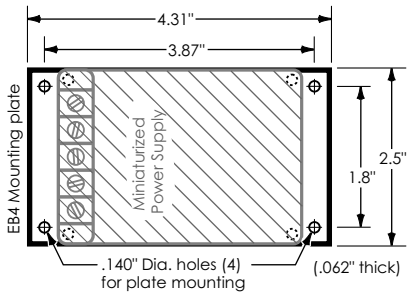
Mounting: Threaded mounting holes permit mounting to a chassis, cabinet wall or bracket, or they may be used on a test bench or tabletop. When wall-mounting or DIN rail mounting is desired, use accessory Mounting Kits on page 19.



Case Size EBC-10
Approx. Weight: 14 oz.

ACCESSORY MOUNTING KITS *For use with 'Miniaturized - with Screw Terminals' power supplies.*

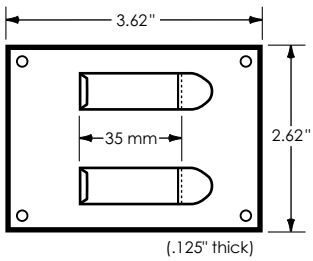
FOR WALL MOUNTING



Use Mounting Kit EB4 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 Miniaturized power supply with screw terminals or any DC-DC Converter with screw terminals.

Model EB4 . . . . . $ 5

FOR DIN RAIL MOUNTING



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 Miniaturized power supply with screw terminals or any 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 40°C	55°C	71°C	Regulation Load ±%	Line ±%	($) Price	Model
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
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	See pages 14-15.							

DUAL TRACKING OUTPUTS

Nominal Input Voltage	Nominal Output Voltages	Amps. per Output at 40°C	55°C	71°C	Regulation Load ±%	Line ±%	($) Price	Model
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
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

Gold Box

SINGLE OUTPUT

LINEAR REGULATED
AC-DC

SERIES A (High Performance)

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

Series A power supplies offer unusually high performance—many models have regulation of ±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 22 and 23. 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.

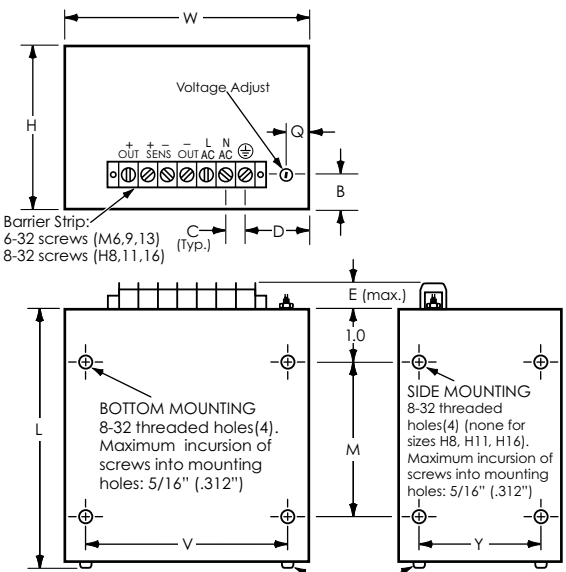
OPTIONS

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.



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

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 37.

Gold Box

SINGLE OUTPUT

LINEAR REGULATED
AC-DC

SERIES B (General Purpose)

- Shipped Within 3 Days
- All Models U.L. Recognized
- 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 ±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 22 and 23. 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.

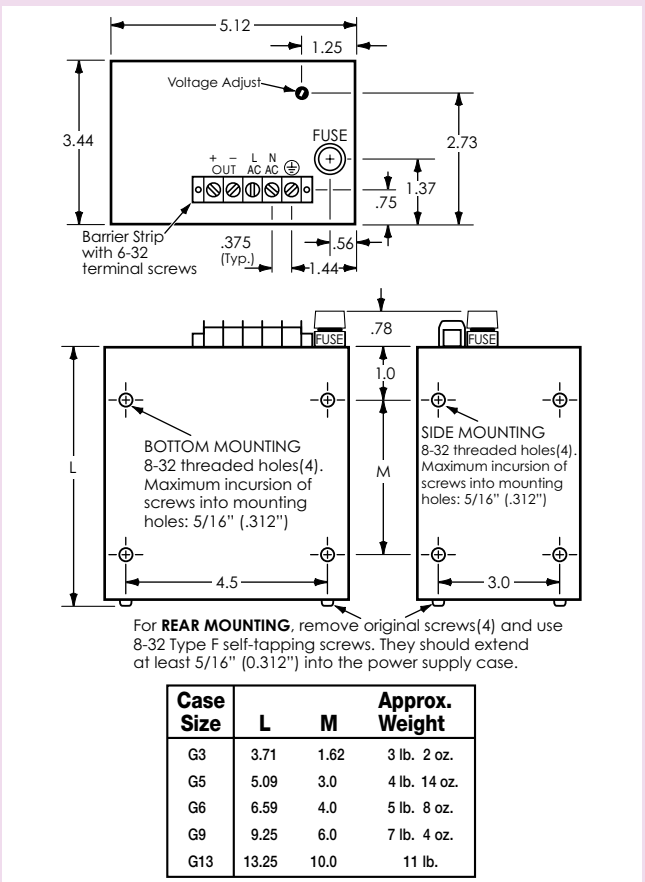
OPTIONS

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.



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.

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 37.

SERIES A & B (1.5 - 20 volt)

Nominal Output Voltage	Adjust ±V	Output Current Amps. at 40°C	55°C	71°C	Regulation Load ± %*	Line ± %*	Ripple mV RMS	($) Price	Model	Case Size
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	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	Adjust ±V	Output Current Amps. at 40°C	55°C	71°C	Regulation Load ± %*	Line ± %*	Ripple mV RMS	($) Price	Model	Case Size
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	.005	.250	335	A15H1150	H8
15	.5	15.0	12.8	10.5	.005	.005	.250	380	A15H1500	H11
15	.5	19.0	16.3	13.5	.005	.005	.250	440	A15H1900	H16
16	1	.300	.300	.300	.05	.05	1	80	B16G30	G3
16	.5	1.0	1.0	1.0	.1	.1	1	125	B16G100	G3
16	.5	3.0	2.5	2.0	.15	.1	1	190	B16G300	G9
16	.5	5.0	5.0	5.0	.2	.1	1.5	245	B16G500	G9
16	.5	6.5	6.0	5.5	.005	.005	.250	280	A16MT650	M13
18	1	.300	.300	.300	.05	.05	1	80	B18G30	G3
18	1	.750	.750	.750	.1	.1	1	110	B18G75	G3
18	.5	1.1	1.1	1.0	.1	.1	1	125	B18G110	G5
18	.5	2.1	2.0	1.8	.1	.1	1	155	B18G210	G5
18	.5	2.1	2.1	2.0	.005	.005	.250	175	A18MT210	M6
18	.5	3.0	2.8	2.5	.15	.1	1	190	B18G300	G9
18	.5	4.5	4.0	3.5	.005	.005	.250	235	A18MT450	M9
18	.5	6.5	6.0	5.5	.005	.005	.250	280	A18MT650	M13
18	.5	14.0	12.0	10.0	.005	.005	.250	385	A18H1400	H11
18	.5	18.0	15.5	13.0	.005	.005	.250	440	A18H1800	H16
20	1	.300	.300	.300	.05	.05	1	80	B20G30	G3
20	1	.750	.750	.750	.1	.05	1	110	B20G75	G3
20	1	1.1	1.1	1.0	.1	.1	1	125	B20G110	G5
20	.5	1.7	1.7	1.5	.1	.1	1.5	140	B20G170	G5
20	.5	2.0	2.0	2.0	.005	.005	.250	180	A20MT200	M6
20	.5	2.7	2.0	1.2	.15	.1	1.5	190	B20G270	G6
20	.5	4.0	3.5	3.0	.005	.005	.250	235	A20MT400	M9
20	.5	5.0	5.0	5.0	.15	.1	1.5	250	B20G500	G13
20	.5	6.0	5.5	5.0	.005	.005	.250	280	A20MT600	M13
20	.5	9.5	8.0	6.6	.005	.005	.250	335	A20H950	H8
20	.5	13.0	11.3	9.5	.005	.005	.250	385	A20H1300	H11
20	.5	16.0	14.0	12.0	.005	.005	.250	440	A20H1600	H16

*or 2 mv, whichever is greater

SERIES A & B (24 - 200 volt)

Nominal Output Voltage	Adjust ±V	Output Current Amps. at 40°C	55°C	71°C	Regulation Load ± %	Line ± %	Ripple mV RMS	($) Price	Model	Case Size
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	100	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	Adjust ±V	Output Current Amps. at 40°C	55°C	71°C	Regulation Load ± %	Line ± %	Ripple mV RMS	($) Price	Model	Case Size
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	1.5	235	B120G55	G6
120	1	.600	.500	.400	.005	.005	.250	275	A120M60	M6
120	1	1.2	1.1	1.0	.005	.005	.250	305	A120MT120	M13
120	1	2.5	2.0	1.6	.01	.01	1	445	A120HT250	H11
120	1	3.5	2.9	2.3	.01	.01	1	535	A120HT350	H16
125	1	.200	.200	.200	.05	.05	1	190	B125GT20	G3
125	1	.400	.400	.300	.1	.1	1.5	205	B125GT40	G6
125	1	.500	.400	.300	.005	.005	.250	285	A125MT50	M6
125	1	.550	.550	.550	.1	.1	1.5	245	B125G55	G6
125	1	1.2	1.1	1.0	.005	.005	.250	315	A125MT120	M13
125	1	2.5	2.0	1.6	.01	.01	1	455	A125HT250	H11
125	1	3.5	2.9	2.3	.01	.01	1	545	A125HT350	H16
130	1	.200	.200	.200	.05	.05	1	195	B130GT20	G3
135	1	.200	.200	.200	.05	.05	1	195	B135GT20	G3
140	1	.200	.200	.200	.05	.05	1	195	B140GT20	G3
150	1	.100	.100	.100	.05	.05	1	160	B150GT10	G3
150	1	.200	.200	.200	.05	.05	1	190	B150GT20	G3
150	1	.320	.320	.250	.1	.1	1.5	210	B150GT32	G6
150	1	.420	.420	.420	.1	.1	1.5	225	B150GT42	G9
150	1	1.0	.900	.800	.005	.005	.250	335	A150MT100	M13
150	1	3.0	2.5	2.0	.01	.01	1	555	A150HT300	H16
200	1	.100	.100	.100	.1	.05	1.5	190	B200GT10	G3

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.

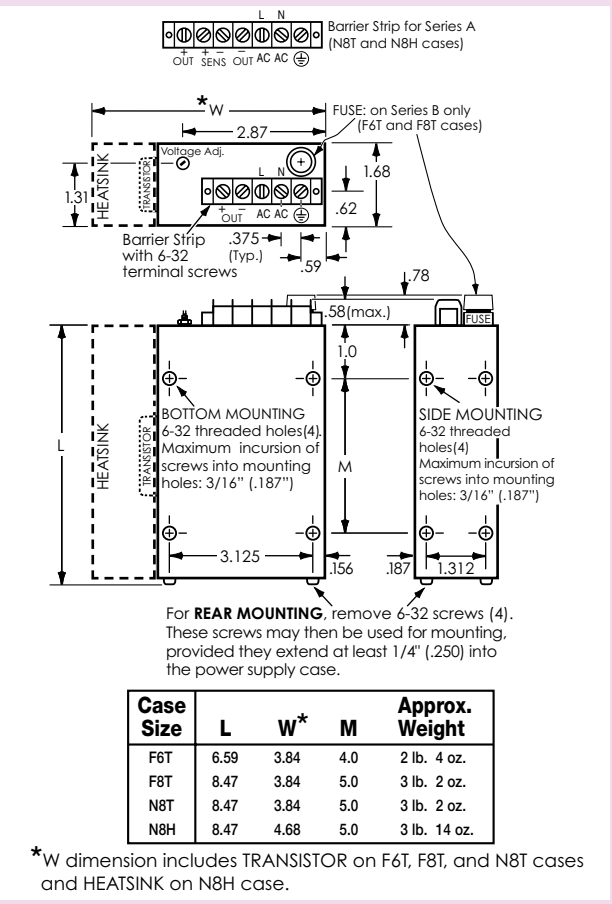
Overload/Short Circuit Protection:
Series A: Foldback current limiting with automatic recovery.
Series B: Input fuse and output current limiting.

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.



Case Size	L	W*	M	Approx. Weight
F6T	6.59	3.84	4.0	2 lb. 4 oz.
F8T	8.47	3.84	5.0	3 lb. 2 oz.
N8T	8.47	3.84	5.0	3 lb. 2 oz.
N8H	8.47	4.68	5.0	3 lb. 14 oz.

*W dimension includes TRANSISTOR on F6T, F8T, and N8T cases and HEATSINK on N8H case.

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 37.

NARROW PROFILE SINGLE OUTPUT (continued)

Nominal Output Voltage	Adjust ±V	Output Current Amps. at 40°C	55°C	71°C	Regulation Load ± %*	Line ± %*	Ripple mV RMS	($) Price	Model	Case Size
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	Adjust ±V	Output Current Amps. at 40°C	55°C	71°C	Regulation Load ± %	Line ± %	Ripple mV RMS	($) Price	Model	Case Size
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	A30NT75	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

Gold Box & Narrow Profile

WIDE ADJUST OUTPUT

LINEAR REGULATED
AC-DC
(fixed & adjustable current limiting)

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

Narrow Profile

Gold Box

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

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.

SPECIFICATIONS

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

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

Regulation, Ripple (in constant current mode):
Line Regulation: ±0.1% or 2 mA.
Load Regulation: ±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, ±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.

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 37.

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, ½ 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

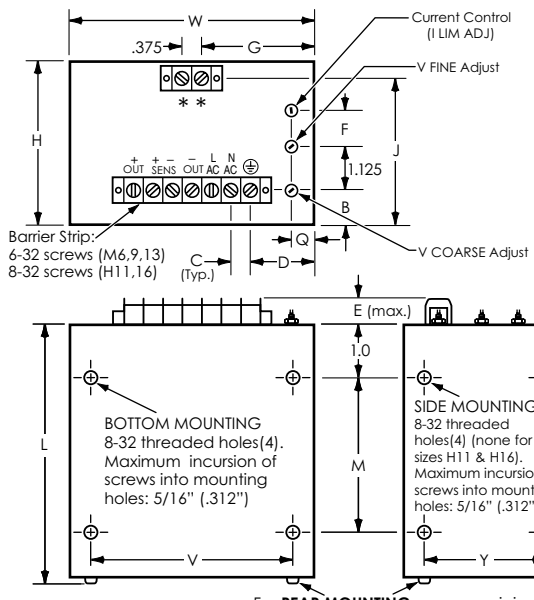
Output Voltage Range	Output Current Amps. at 40°C	55°C	71°C	Voltage Prgmg. Coeff. (Ω/V)	Case Size	Voltage Programmable Fixed Current Limiting Model	Price ($)	Voltage Programmable Adjust. Current Limiting Model	Price ($)
0-6	1.2	1.2	1.2	820	M6	A06MX120	165	P06MX120	185
0-6	2.0	2.0	2.0	820	M6	A06MX200	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

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

NARROW PROFILE MODELS
(for limited space applications)

Output Voltage Range	Output Current Amps. (to +71°C)	Voltage Prgmg. 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

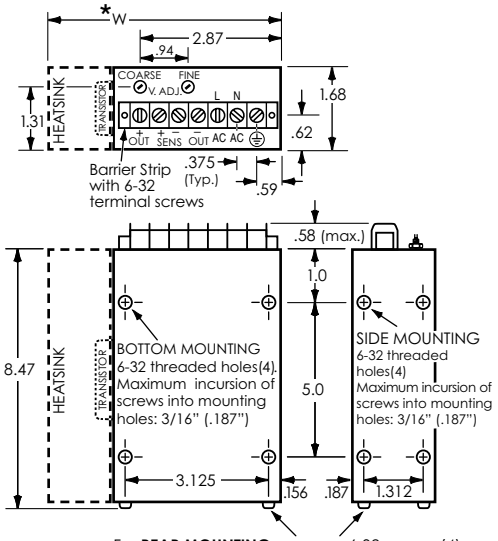
Gold Box



* * 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	4 lb. 4 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	7 lb. 4 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	11 lb.
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	18 lb. 4 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	23 lb.

Narrow Profile



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

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

Narrow Profile Gold Box

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: ±0.1%.

Line Regulation: ±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.

Dimensions: See page 29 for case dimensions.

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 37.

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.

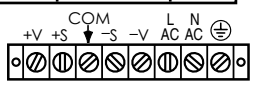
Terminal Strip Cover: Clips on. To order, add suffix "M" to model number and $5.00 to price.

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

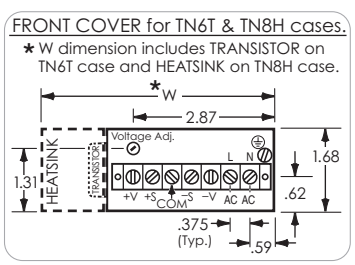
Nominal Output Voltages	Adjust Range ± V	Amps. per Output at 40°C	55°C	71°C	($) Price	Model	Case Size
±5	.5	.750	.650	.550	190	TD5-75	TG5
±5	.5	1.5	1.25	1.0	225	TD5-150	TG6
±5	.5	2.5	2.0	1.5	270	TD5-250	TG9
±12	1	1.0	.900	.800	195	TD12-100	TG5
±12	1	1.6	1.4	1.0	230	TD12-160	TG6
±12	1	2.5	2.0	1.5	270	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:
(See page 29 for complete drawing.)



NARROW PROFILE MODELS
(for limited space applications)

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



See page 29 for complete drawing.

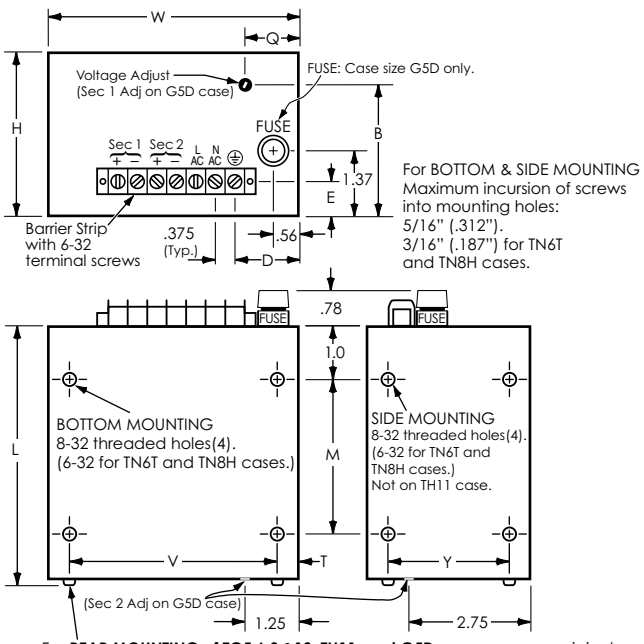
Acopian

Gold Box
DUAL ISOLATED OUTPUTS
(User-selectable)
LINEAR REGULATED
AC-DC

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

Acopian general purpose duals furnish two completely independent outputs, either identical or different, in less space and at less cost than two equivalent single output supplies. Thousands of output voltage/current rating combinations are available. Mounting and system wiring are simplified. Quality components, generously derated, insure long-term reliability.

Dual Tracking & Dual Isolated Case Sizes:
(on page 28) (on page 29)



For **REAR MOUNTING of TG5,6,9 &13, TH11, and G5D cases**, 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.
(When **rear mounting G5D case**, a hole is required in the mounting surface for access to the Section 2 output adjustment.)

For **REAR MOUNTING of TN6T and TN8H cases**, remove original 6-32 screws(4). These screws may then be used for mounting, provided they extend at least 1/4" (0.250") into the power supply case.

Case Size	L	W	H	M	V	Y	E	Q	B	D	T	Approx. Weight
G5D	5.09	5.12	3.44	3.0	4.50	3.0	.75	1.25	2.73	1.44	.31	4 lb.
TG5	5.09	5.12	3.44	3.0	4.50	3.0	.75	1.25	2.73	1.44	.31	3 lb. 4 oz.
TG6	6.59	5.12	3.44	4.0	4.50	3.0	.75	1.25	2.73	1.44	.31	4 lb. 4 oz.
TG9	9.25	5.12	3.44	6.0	4.50	3.0	.75	1.25	2.73	1.44	.31	6 lb. 8 oz.
TG13	13.25	5.12	3.44	10.0	4.50	3.0	.75	1.25	2.73	1.44	.31	12 lb.
TH11	11.25	7.37	5.12	8.0	6.75	4.56	.75	2.73	4.36	2.38	.31	18 lb. 4 oz.
TN6T	6.59	3.84*		4.0	3.12	1.31					.156	2 lb. 4 oz.
TN8H	8.47	4.68*		5.0	3.12	1.31					.156	3 lb. 14 oz.

* see page 28 for front cover drawing.

HOW TO ORDER: Select two **sections** (from the same table) on pages 30 and 31. The complete model number is the combination of the two **sections** selected. Example: The combination of section 5GT20D and section 8GT50D is Model 5GT20D-8GT50D. Always assign the lower voltage section first. (Two of the same section can also be selected.) For pricing purposes, add the costs of the individual sections selected.

SPECIFICATIONS

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

Output Specifications: See pages 30 and 31.

Short Circuit Protection: Delivers current surges without damage—built-in fuse protects supply against prolonged overloads and shorts.

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 +71°C.
No derating required.

Storage Temperature: –55 to +85°C.

Case size: G5D.

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 37.

OPTIONS

Overvoltage Protection: Two separate, preset overvoltage protection circuits, one for each output. To order, add prefix "V" to model number and add $30.00 to the standard price for 1.5 to 70 volt outputs; add $50.00 if either or both outputs are greater than 70 volts.

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 the standard price. The "–230" option requires two additional days.

(OUTPUTS TO 500 MA)

Nominal Output Voltage	Adjust Range ± V	Output Current Amps.	Regulation Load ± %	Regulation Line ± %	Ripple mV RMS	(see 'How to Order') Price per Section ($)	(see 'How to Order') Section
1.5	.5	.200	.4	.05	1	80	1.5GT20D
1.5	.5	.400	.5	.1	1	90	1.5GT40D
2.5	.5	.200	.4	.05	1	80	2.5GT20D
2.5	.5	.400	.5	.1	1	90	2.5GT40D
3	.5	.200	.3	.05	1	80	3GT20D
3	.5	.400	.5	.1	1	90	3GT40D
3.3	.5	.200	.2	.05	1	80	3.3GT20D
3.3	.5	.400	.3	.1	1	90	3.3GT40D
5	.5	.200	.2	.05	1	80	5GT20D
5	.5	.500	.3	.05	1	90	5GT50D
6	1	.200	.05	.05	1	80	6GT20D
6	1	.500	.15	.05	1	90	6GT50D
7	1	.200	.05	.05	1	80	7GT20D
7	1	.500	.15	.05	1	90	7GT50D
8	1	.200	.05	.05	1	80	8GT20D
8	1	.500	.1	.05	1	90	8GT50D
9	1	.200	.05	.05	1	80	9GT20D
9	1	.500	.1	.05	1	90	9GT50D
10	1	.250	.05	.05	1	80	10GT25D
10	1	.500	.1	.05	1	90	10GT50D
11	1	.250	.05	.05	1	80	11GT25D
11	1	.500	.1	.05	1	90	11GT50D
12	1	.250	.05	.05	1	80	12GT25D
12	1	.500	.1	.05	1	90	12GT50D
13	1	.250	.05	.05	1	80	13GT25D
13	1	.500	.1	.05	1	90	13GT50D
15	1	.250	.05	.05	1	80	15GT25D
15	1	.500	.1	.05	1	90	15GT50D
16	1	.250	.05	.05	1	80	16GT25D
16	1	.500	.1	.05	1	90	16GT50D
17	1	.250	.05	.05	1	80	17GT25D
17	1	.500	.1	.05	1	90	17GT50D
18	1	.250	.05	.05	1	80	18GT25D
18	1	.500	.1	.05	1	90	18GT50D
19	1	.250	.05	.05	1	80	19GT25D
19	1	.500	.1	.05	1	90	19GT50D
20	1	.250	.05	.05	1	80	20GT25D
20	1	.500	.1	.05	1	90	20GT50D
21	1	.250	.05	.05	1	80	21GT25D
21	1	.500	.1	.05	1	90	21GT50D
22	1	.250	.05	.05	1	80	22GT25D
22	1	.500	.1	.05	1	90	22GT50D
23	1	.250	.05	.05	1	80	23GT25D
23	1	.500	.1	.05	1	90	23GT50D
24	1	.250	.05	.05	1	80	24GT25D
24	1	.500	.05	.05	1	90	24GT50D
25	1	.250	.05	.05	1	80	25GT25D
25	1	.500	.05	.05	1	90	25GT50D
26	1	.250	.05	.05	1	80	26GT25D
26	1	.400	.05	.05	1	90	26GT40D
28	1	.250	.05	.05	1	80	28GT25D
28	1	.400	.05	.05	1	90	28GT40D
30	1	.250	.05	.05	1	80	30GT25D
30	1	.400	.05	.05	1	90	30GT40D
31	1	.100	.05	.05	1	80	31GT10D
31	1	.300	.05	.05	1	90	31GT30D
32	1	.100	.05	.05	1	80	32GT10D
32	1	.300	.05	.05	1	90	32GT30D
33	1	.100	.05	.05	1	80	33GT10D
33	1	.300	.05	.05	1	90	33GT30D

Nominal Output Voltage	Adjust Range ± V	Output Current Amps.	Regulation Load ± %	Regulation Line ± %	Ripple mV RMS	(see 'How to Order') Price per Section ($)	(see 'How to Order') Section
34	1	.100	.05	.05	1	80	34GT10D
34	1	.300	.05	.05	1	90	34GT30D
35	1	.100	.05	.05	1	80	35GT10D
35	1	.200	.05	.05	1	90	35GT20D
36	1	.100	.05	.05	1	80	36GT10D
36	1	.200	.05	.05	1	90	36GT20D
38	1	.100	.05	.05	1	80	38GT10D
38	1	.200	.05	.05	1	90	38GT20D
40	1	.100	.05	.05	1	80	40GT10D
40	1	.200	.05	.05	1	90	40GT20D
42	1	.100	.05	.05	1	80	42GT10D
42	1	.200	.05	.05	1	90	42GT20D
44	1	.100	.05	.05	1	80	44GT10D
44	1	.200	.05	.05	1	90	44GT20D
45	1	.100	.05	.05	1	80	45GT10D
45	1	.200	.05	.05	1	90	45GT20D
46	1	.100	.05	.05	1	80	46GT10D
46	1	.200	.05	.05	1	90	46GT20D
48	1	.100	.05	.05	1	85	48GT10D
48	1	.200	.05	.05	1	95	48GT20D
50	1	.100	.05	.05	1	85	50GT10D
50	1	.200	.05	.05	1	95	50GT20D
52	1	.100	.05	.05	1	90	52GT10D
52	1	.200	.05	.05	1	100	52GT20D
54	1	.100	.05	.05	1	90	54GT10D
54	1	.200	.05	.05	1	100	54GT20D
55	1	.100	.05	.05	1	90	55GT10D
55	1	.200	.05	.05	1	100	55GT20D
56	1	.050	.05	.05	1	90	56GT05D
56	1	.100	.05	.05	1	100	56GT10D
58	1	.050	.05	.05	1	90	58GT05D
58	1	.100	.05	.05	1	100	58GT10D
60	1	.050	.05	.05	1	90	60GT05D
60	1	.100	.05	.05	1	100	60GT10D
62	1	.050	.05	.05	1	90	62GT05D
62	1	.100	.05	.05	1	100	62GT10D
64	1	.050	.05	.05	1	90	64GT05D
64	1	.100	.05	.05	1	100	64GT10D
65	1	.050	.05	.05	1	90	65GT05D
65	1	.100	.05	.05	1	100	65GT10D
67	1	.050	.05	.05	1	90	67GT05D
67	1	.100	.05	.05	1	100	67GT10D
68	1	.050	.05	.05	1	90	68GT05D
68	1	.100	.05	.05	1	100	68GT10D
69	1	.050	.05	.05	1	90	69GT05D
69	1	.100	.05	.05	1	100	69GT10D
70	1	.050	.05	.05	1	90	70GT05D
70	1	.100	.05	.05	1	100	70GT10D
75	1	.050	.05	.05	1	90	75GT05D
75	1	.100	.05	.05	1	100	75GT10D
76	1	.020	.05	.05	1	90	76GT02D
76	1	.050	.05	.05	1	100	76GT05D
80	1	.020	.05	.05	1	90	80GT02D
80	1	.050	.05	.05	1	100	80GT05D
85	1	.020	.05	.05	1	95	85GT02D
85	1	.050	.05	.05	1	105	85GT05D
90	1	.020	.05	.05	1	95	90GT02D
90	1	.050	.05	.05	1	105	90GT05D
95	1	.020	.05	.05	1	100	95GT02D
95	1	.050	.05	.05	1	110	95GT05D
100	1	.020	.05	.05	1	105	100GT02D
100	1	.050	.05	.05	1	115	100GT05D

(OUTPUTS TO 2 AMPS.)

Nominal Output Voltage	Adjust Range ± V	Output Current Amps.	Regulation		Ripple mV RMS	(see 'How to Order')	
			Load ± %	Line ± %		Price per Section ($)	Section
1.5	.5	.400	.5	.1	1	90	1.5GT40D
2.5	.5	.400	.5	.1	1	90	2.5GT40D
3	.5	.400	.5	.1	1	90	3GT40D
3	.5	.700	.5	.1	1	95	3GT70D
3	.5	1.0	.5	.1	1	100	3GT100D
3.3	.5	.400	.3	.1	1	90	3.3GT40D
3.3	.5	.700	.4	.1	1	95	3.3GT70D
3.3	.5	1.0	.5	.1	1	100	3.3GT100D
5	.5	.500	.3	.05	1	90	5GT50D
5	.5	.700	.4	.05	1	95	5GT70D
5	.5	1.0	.5	.05	1	100	5GT100D
5	.25	2.0	.5	.05	1	115	5GT200D
6	1	.500	.15	.05	1	90	6GT50D
6	.5	.700	.2	.05	1	95	6GT70D
6	.5	1.0	.3	.05	1	100	6GT100D
7	1	.500	.15	.05	1	90	7GT50D
7	.5	.700	.2	.05	1	95	7GT70D
7	.5	1.0	.3	.05	1	100	7GT100D
8	1	.500	.1	.05	1	90	8GT50D
8	.5	.700	.15	.05	1	95	8GT70D
8	.5	1.0	.2	.05	1	100	8GT100D
9	1	.500	.1	.05	1	90	9GT50D
9	.5	.700	.15	.05	1	95	9GT70D
9	.5	1.0	.2	.05	1	100	9GT100D
10	1	.500	.1	.05	1	90	10GT50D
10	.5	.700	.15	.05	1	95	10GT70D
10	.5	1.0	.2	.05	1	100	10GT100D
12	1	.500	.1	.05	1	90	12GT50D
12	.5	.700	.1	.05	1	95	12GT70D
12	.5	1.0	.1	.05	1	100	12GT100D
14	1	.500	.1	.05	1	90	14GT50D
14	.5	.700	.1	.05	1	95	14GT70D
14	.5	1.0	.1	.05	1	100	14GT100D
15	1	.500	.1	.05	1	90	15GT50D
15	.5	.700	.1	.05	1	95	15GT70D
15	.5	1.0	.1	.05	1	100	15GT100D
16	1	.500	.1	.05	1	90	16GT50D
16	.5	.700	.1	.05	1	95	16GT70D
16	.5	1.0	.1	.05	1	105	16GT100D
18	1	.500	.1	.05	1	90	18GT50D
18	.5	.700	.1	.05	1	95	18GT70D
18	.5	1.0	.1	.05	1	105	18GT100D
19	1	.500	.1	.05	1	90	19GT50D
19	.5	.750	.1	.05	1	100	19GT75D
20	1	.500	.1	.05	1	90	20GT50D
20	.5	.750	.1	.05	1	100	20GT75D

(90 TO 150 VOLTS)

Nominal Output Voltage	Adjust Range ± V	Output Current Amps.	Regulation		Ripple mV RMS	(see 'How to Order')	
			Load ± %	Line ± %		Price per Section ($)	Section
90	1	.050	.05	.05	1	105	90GT05D
90	1	.100	.05	.05	1	120	90GT10D
95	1	.050	.05	.05	1	110	95GT05D
95	1	.100	.05	.05	1	125	95GT10D
100	1	.050	.05	.05	1	115	100GT05D
100	1	.100	.05	.05	1	130	100GT10D
105	1	.050	.05	.05	1	115	105GT05D
105	1	.100	.05	.05	1	130	105GT10D
110	1	.050	.05	.05	1	120	110GT05D
110	1	.100	.05	.05	1	135	110GT10D
115	1	.050	.05	.05	1	120	115GT05D
115	1	.100	.05	.05	1	135	115GT10D
120	1	.050	.05	.05	1	125	120GT05D
120	1	.100	.05	.05	1	140	120GT10D
125	1	.050	.05	.05	1	130	125GT05D
125	1	.100	.05	.05	1	145	125GT10D
130	1	.050	.05	.05	1	130	130GT05D
130	1	.100	.05	.05	1	145	130GT10D
135	1	.050	.05	.05	1	130	135GT05D
135	1	.100	.05	.05	1	145	135GT10D
140	1	.050	.05	.05	1	130	140GT05D
140	1	.100	.05	.05	1	145	140GT10D
145	1	.050	.05	.05	1	130	145GT05D
145	1	.100	.05	.05	1	145	145GT10D
150	1	.050	.05	.05	1	130	150GT05D
150	1	.100	.05	.05	1	145	150GT10D

Gold Box

DUAL ISOLATED OUTPUTS
(5v/12v combinations)

LINEAR REGULATED
AC-DC

- Shipped Within 3 Days
- Five Year Warranty

Dual isolated output power supplies may be connected to provide any desired arrangement of positive and negative output voltages. Each voltage is independently adjustable. No derating is required up to +60°C. A separate overvoltage protector on each output is available as a built-in option.

SPECIFICATIONS

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

Polarity: Outputs are floating. Each 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.

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 37.

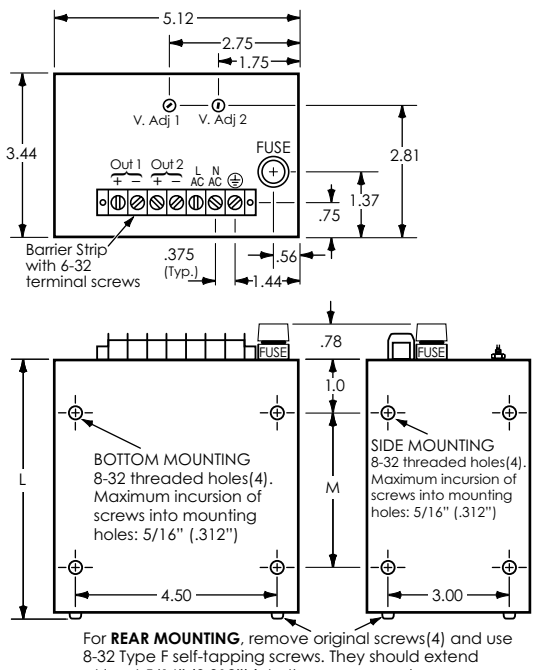
OPTIONS

Overvoltage Protection: Two separate, preset overvoltage protection circuits, one for each output. To order, add prefix "V" to model number and add $45.00 to the standard 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 the standard price. The "–230" option requires two additional days.

Nominal Output Voltages	Adjust Range ± V	Output Current Amps.	Regulation Load ± %	Regulation Line ± %	Ripple mV RMS	($) Price	Model	Case Size
5 12	.25 1	2.0 .600	.15 .15	.15 .15	1 1	195	512D5A	DG5
5 12	.25 1	3.0 1.2	.15 .15	.15 .15	1 1	225	512D6A	DG6
5 12	.25 1	6.0 2.4	.15 .15	.15 .15	1 1	275	512D9A	DG9



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
DG5	5.09	3.0	4 lb.
DG6	6.59	4.0	4 lb. 4 oz.
DG9	9.25	6.0	6 lb. 8 oz.

Gold Box
TRIPLE ISOLATED OUTPUTS
LINEAR REGULATED
AC-DC

- Shipped Within 3 Days
- 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 37.

OPTIONS

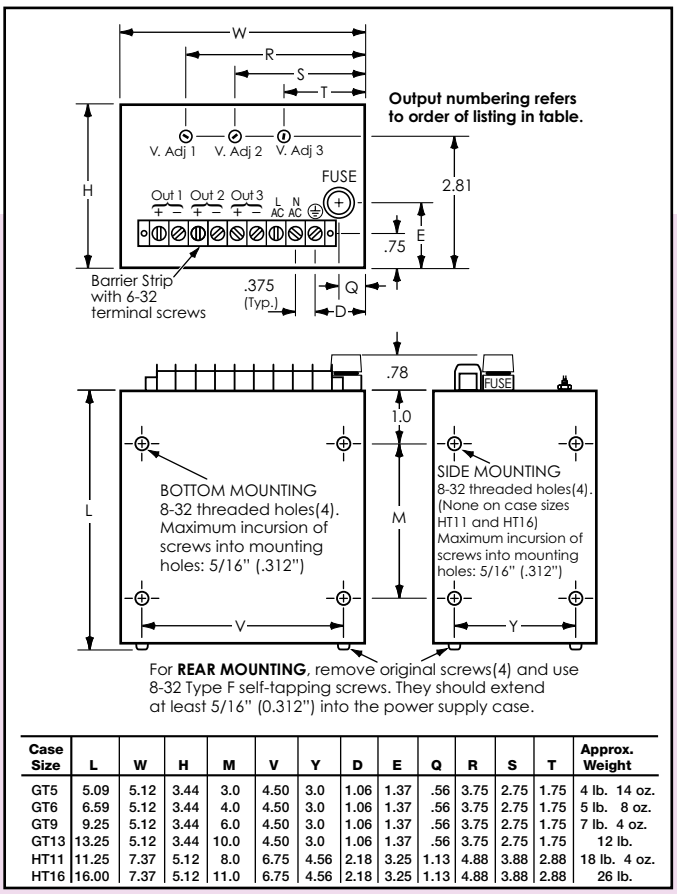
Overvoltage Protection: Separate overvoltage protection circuit on each output. Add prefix "3V" to model number and increase standard price as follows:

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 Load ± %	Regulation Line ± %	Ripple mV RMS	($) Price	Model	Case Size
5 5 12	.25 .25 1	3.0 1.0 .600	.15 .15 .15	.15 .15 .15	1 1 1	240	5512T6A	GT6
5 5 12	.25 .25 1	6.0 2.0 1.2	.15 .15 .15	.15 .15 .15	1 1 1	295	5512T9A	GT9
5 9 12	.25 1 1	6.0 1.4 1.2	.15 .15 .15	.15 .15 .15	1 1 1	295	5912T9A	GT9
5 12 12	.25 1 1	2.0 .300 .300	.15 .15 .15	.15 .15 .15	1 1 1	215	51212T5A	GT5
5 12 12	.25 1 1	3.0 .600 .600	.15 .15 .15	.15 .15 .15	1 1 1	240	51212T6A	GT6
5 12 12	.25 1 1	6.0 1.2 1.2	.15 .15 .15	.15 .15 .15	1 1 1	295	51212T9A	GT9
5 12 12	.25 1 1	8.0 1.3 1.3	.15 .15 .15	.15 .15 .15	1 1 1	335	51212T13A	GT13
5 12 12	.5 1 1	15.0 2.0 2.0	.15 .15 .15	.15 .15 .15	1 1 1	410	51212T11A	HT11



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 Load ± %	Regulation Line ± %	Ripple mV RMS	($) Price	Model	Case Size
5 12 12	.5 1 1	20.0 3.0 3.0	.15 .15 .15	.15 .15 .15	1 1 1	470	51212T16A	HT16
5 15 15	.25 1 1	2.0 .250 .250	.15 .15 .15	.15 .15 .15	1 1 1	215	51515T5A	GT5
5 15 15	.25 1 1	3.0 .500 .500	.15 .15 .15	.15 .15 .15	1 1 1	240	51515T6A	GT6
5 15 15	.25 1 1	6.0 1.0 1.0	.15 .15 .15	.15 .15 .15	1 1 1	295	51515T9A	GT9
5 15 15	.25 1 1	8.0 1.1 1.1	.15 .15 .15	.15 .15 .15	1 1 1	335	51515T13A	GT13
5 15 15	.5 1 1	15.0 1.5 1.5	.15 .15 .15	.15 .15 .15	1 1 1	410	51515T11A	HT11
5 15 15	.5 1 1	20.0 2.5 2.5	.15 .15 .15	.15 .15 .15	1 1 1	470	51515T16A	HT16

Gold Box
UNREGULATED
AC-DC
single output & wide adjust output


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

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

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 20 and 21, 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.

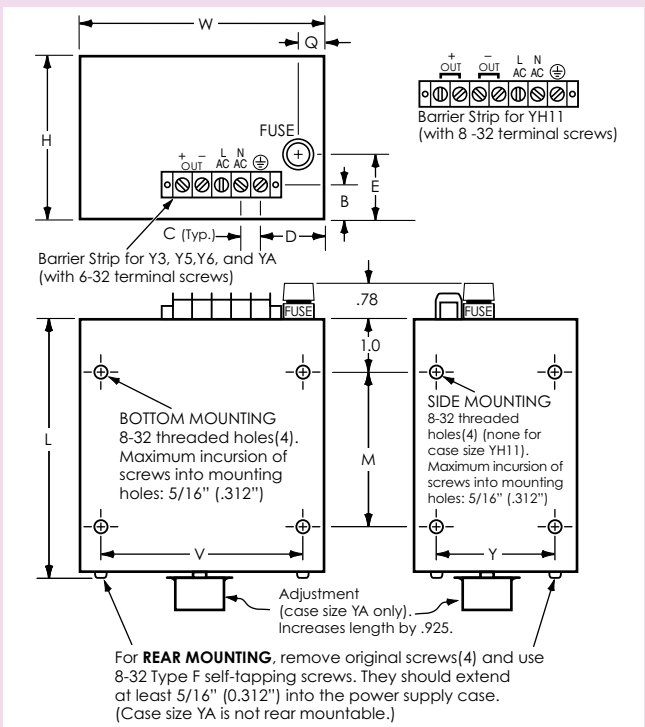
Ambient Operating Temperature: –10 to +65°C. No derating required.

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.



Case Size	L	W	H	M	V	Y	Q	E	B	D	C	Approx. Weight
Y3	3.71	5.12	3.44	1.62	4.5	3.0	.56	1.37	.75	1.44	.375	2 lb. 8 oz.
Y5	5.09	5.12	3.44	3.0	4.5	3.0	.56	1.37	.75	1.44	.375	4 lb. 8 oz.
Y6	6.59	5.12	3.44	4.0	4.5	3.0	.56	1.37	.75	1.44	.375	7 lb. 8 oz.
YH11	11.25	7.37	5.12	8.0	6.75	4.56	1.10	2.64	1.25	2.25	.562	18 to 23 lb.
YA	6.59	5.12	3.44	4.0	4.5	3.0	.56	1.37	.75	1.44	.375	4 to 5 lb.

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 37.

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	1.0	33.0 to 27.0	1.6	80	30UY100	Y3
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	40UY100	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
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	45UY100	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	50UY100	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
65	.250	71.5 to 58.5	.4	80	U65Y25	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	250UY20	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

SWITCHING REGULATED

AC-DC

single output & wide adjust output

- Shipped Within 9 Days
- All Models U.L. Recognized
- Five Year Warranty (fans-1 year)

These ruggedly-built power supplies have tightly regulated outputs and low output ripple. Features include status indicator lights, overvoltage protection, EMI filtering, 'soft start' operation and provision for external output inhibiting (TTL-compatible).

SPECIFICATIONS

Input Voltage: 90-132 VAC, 49-61 Hz, single phase. For models W24GT50, W28GT42 and W48GT25, the use of a 30A line is recommended and when operating on 50 Hz input, derate output by 5%.

Startup Time: 400 mS maximum (250 mS 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%

Remote Voltage Programming: The output voltage may be controlled by means of an external potentiometer (2500 ohms for single output models; 50,000 ohms for wide adjust output models).

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: 33 mS minimum (At nominal input voltage, with full load).

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: Foldback current limiting with automatic recovery.

Overvoltage Protection: Latches power supply OFF, reset by momentarily removing AC input power. Red indicator lights to indicate latchup.

Output Inhibit: Applying between +2 and +30 Vdc to the inhibit terminal will disable the supply (TTL compatible).

Thermal Protection: Thermostat, self-resetting.

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: Forced-air cooled (ball bearing fan); air enters back of power supply and exits from front.

Switching Frequency: 55 kHz (Typical).

Isolation:

Input to output: 1400 Vdc
Input to case: 1400 Vdc
Output to case: 400 Vdc

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 37.

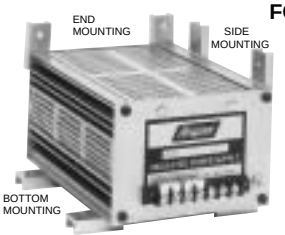
OPTIONS

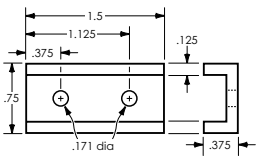
230 Volt Input: For applications where operation on an input of 180-264 VAC, 49-61 Hz, is desired. To order, add suffix "–230" to the model number and $40.00 to the standard price.The "–230" option requires two additional days.

ACCESSORY MOUNTING KITS

For use with Gold Box, Narrow Profile, and modular High Voltage power supplies.

FOR WALL MOUNTING





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.

For Gold Box and modular High Voltage power supplies:

Model GB8 *(#8-32 mounting holes)* **. $8**

For Narrow Profile power supplies:

Case Sizes F6T, F8T, N8T, TN6T

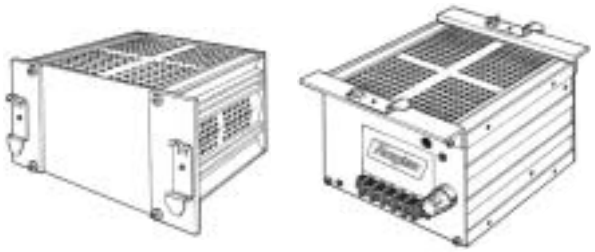
Model NP6*(#6-32 mounting holes)* **. $8**

Case Sizes N8H, TN8H

Model NP6L*(#6-32 mounting holes)* **. $8**

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

FOR DIN RAIL MOUNTING



Five different models of DIN rail Mounting Kits are available. Contact factory for detailed information.

DIN rail Mounting Kit. $15

SINGLE OUTPUT MODELS

Nominal Output Voltage	Adjust Range ± V	Output Current Amps. at 40°C	Output Current Amps. at 71°C	Ripple mV (@ 25 MHz BW) RMS	Ripple mV (@ 25 MHz BW) P-P	Effic. (Typ.) %	($) Price	Model	Case Size
3.3	.25	65	45	10	50	65	595	W3.3MT65	WM6
3.3	.25	100	70	10	50	65	795	W3.3MT100	WM9
3.3	.25	150	105	10	50	65	995	W3.3GT150	WG7
5	.25	65	45	10	50	70	595	W5MT65	WM6
5	.25	100	70	10	50	70	795	W5MT100	WM9
5	.25	150	105	10	50	70	995	W5GT150	WG7
6	.25	56	39	10	50	71	595	W6MT56	WM6
6	.25	86	60	10	50	71	795	W6MT86	WM9
8	.25	41	28	15	100	73	595	W8MT41	WM6
8	.25	63	44	15	100	73	795	W8MT63	WM9
9	.25	37	26	15	100	73	595	W9MT37	WM6
9	.25	57	40	15	100	73	795	W9MT57	WM9
10	.5	34	24	15	100	74	595	W10MT34	WM6
10	.5	52	36	15	100	74	795	W10MT52	WM9
12	.5	29	20	15	100	76	595	W12MT29	WM6
12	.5	45	32	15	100	76	795	W12MT45	WM9
12	.5	68	47	15	100	76	995	W12GT68	WG7
15	.5	23	16	15	100	76	595	W15MT23	WM6
15	.5	36	25	15	100	76	795	W15MT36	WM9
15	.5	54	38	15	100	76	995	W15GT54	WG7
18	.5	20	14	15	100	78	595	W18MT20	WM6
18	.5	31	22	15	100	78	795	W18MT31	WM9
20	1	19	13	15	100	79	595	W20MT19	WM6
20	1	28	19	15	100	79	795	W20MT28	WM9
24	1	16	11	15	100	81	595	W24MT16	WM6
24	1	25	18	15	100	81	795	W24MT25	WM9
24	1	38	26	15	100	81	995	W24GT38	WG7
24	1	50	35	15	100	81	1095	W24GT50	WG7
28	1	14	10	15	100	81	595	W28MT14	WM6
28	1	21	15	15	100	81	795	W28MT21	WM9
28	1	32	22	15	100	81	995	W28GT32	WG7
28	1	42	29	15	100	81	1095	W28GT42	WG7
30	1	13	9	25	150	81	595	W30MT13	WM6
30	1	19	13	25	150	81	795	W30MT19	WM9
36	1	10	7	25	150	81	595	W36MT10	WM6
36	1	15	11	25	150	81	795	W36MT15	WM9
40	1	9	6	25	150	82	595	W40MT9	WM6
40	1	14	10	25	150	82	795	W40MT14	WM9
48	1	8	5	25	150	82	595	W48MT8	WM6
48	1	12	8.5	25	150	82	795	W48MT12	WM9
48	1	19	13	25	150	82	995	W48GT19	WG7
48	1	25	17	25	150	82	1095	W48GT25	WG7

WIDE ADJUST OUTPUT MODELS

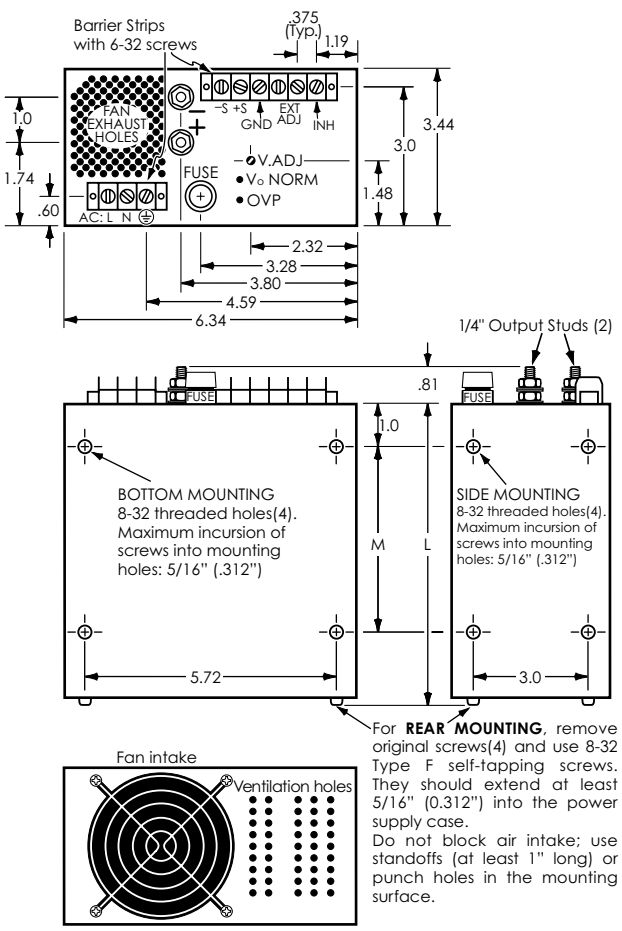
Output Voltage Range	Output Current Amps. at 40°C	Output Current Amps. at 71°C	Ripple mV (@ 25 MHz BW) RMS	Ripple mV (@ 25 MHz BW) P-P	Effic. (Typ.) %*	($) Price	Model	Case Size
5-15	23	16	15	100	76	650	W515MT23	WM6
5-15	36	25	15	100	76	850	W515MT36	WM9
5-15	54	38	15	100	76	1050	W515GT54	WG7
5-30	13	9	25	150	81	650	W530MT13	WM6
5-30	19	13	25	150	81	850	W530MT19	WM9
5-30	30	20	25	150	81	1050	W530GT30	WG7
15-50	8	5	25	150	82	650	W1550MT8	WM6
15-50	12	8.5	25	150	82	850	W1550MT12	WM9
15-50	18	12	25	150	82	1050	W1550GT18	WG7

***** At maximum output voltage

See page 38 for drawings of case sizes WM6, WM9 and WG7.

SWITCHING REGULATED **Gold Box** drawings:

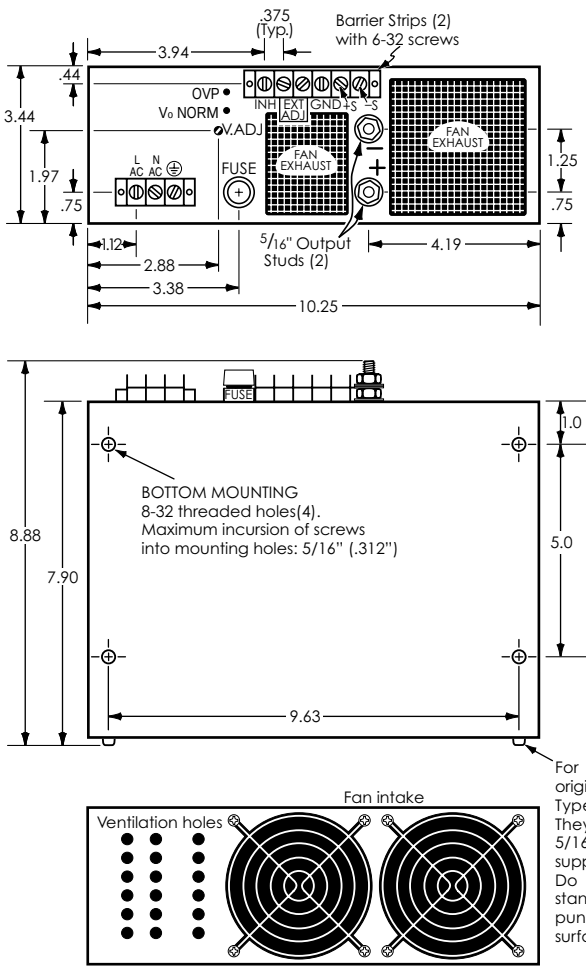
Case Sizes WM6 & WM9



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.
Do not block air intake; use standoffs (at least 1" long) or punch holes in the mounting surface.

Case Size	L	M	Approx. Weight
WM6	6.34	4.0	5 lb. 10 oz.
WM9	9.15	6.0	7 lb. 15 oz.

Case Size WG7



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.
Do not block air intake; use standoffs (at least 1" long) or punch holes in the mounting surface.

Case Size WG7
Approx. Weight: 10 lb. 6 oz.

wide adjust output

Rack Mounting

LINEAR REGULATED
AC-DC
(fixed & adjustable current limiting)


(Meters and handles optional)

- Shipped Within 9 Days
- U.L. Recognized
- Five Year Warranty

Similar to the rack mounting power supplies listed on pages 40 and 41, but with broadened output voltage ranges. All models may be programmed through their voltage ranges by means of external resistance. Models with adjustable current limiting have a constant-voltage/constant-current crossover characteristic, and so may be used as constant current sources.

Output Voltage Range	Output Current Amps. at 40°C	55°C	71°C	Voltage Prgmg. Coeff. (Ω/V)	Case Size	Voltage Programmable Fixed Current Limiting Model	Price ($)	Voltage Programmable Adjust. Current Limiting Model	Price ($)
0-6	10.0	8.0	6.0	820	3P11	A06PX10	520	P06PX10	560
0-6	16.0	12.8	9.6	820	5P12	A06PX16	640	P06PX16	680
0-6*	23.0	18.4	13.8	820	3P17	A06PX23	795	P06PX23	835
0-6*	30.0	24.0	18.0	820	5P17	A06PX30	930	P06PX30	970
0-15	7.0	5.6	4.2	330	3P11	A015PX7	520	P015PX7	560
0-15	10.0	8.0	6.0	330	5P12	A015PX10	640	P015PX10	680
0-15*	13.0	10.4	7.8	330	3P17	A015PX13	795	P015PX13	835
0-15*	17.0	13.6	10.2	330	5P17	A015PX17	930	P015PX17	970
0-30	4.0	3.2	2.4	160	3P11	A030PX4	520	P030PX4	560
0-30	5.0	4.0	3.0	160	5P12	A030PX5	640	P030PX5	680
0-30*	7.0	5.6	4.2	160	3P17	A030PX7	795	P030PX7	835
0-30*	9.0	7.2	5.4	160	5P17	A030PX9	930	P030PX9	970
0-50	2.4	1.9	1.5	1000	3P11	A050PX2	520	P050PX2	560
0-50	3.0	2.4	1.8	1000	5P12	A050PX3	640	P050PX3	680
0-50*	5.0	4.0	3.0	1000	5P17	A050PX5	930	P050PX5	970
0-100*	1.2	.9	.7	500	3P11	A0100PX1.2	575	P0100PX1.2	615
0-100*	1.5	1.2	.9	500	5P12	A0100PX1.5	745	P0100PX1.5	785

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

SPECIFICATIONS

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

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

Regulation, Ripple (in constant current mode):
Line Regulation: ±0.1% or 2 mA.
Load Regulation: ±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 may be controlled by means of external resistance connected in series with the – S lead.

Voltage Programming Coefficient: See table. Calibration tolerance, ± 2%.

Current Limiting/Programming: 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.

Controls: Coarse and fine voltage adjustments, and the current limit adjustment, are located at the rear of the assembly.

Temperature Coefficient (in constant voltage mode): 0.02%/°C (Typical).

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

Storage Temperature: –55 to +85°C.

Dimensions and Connections: See page 40.

OPTIONS

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	6-50V	100V
All case sizes except 5P17	$35.00	$45.00
Case size 5P17	$85.00	

Remote Current Limiting Adjustment: All models having numbers beginning with the letter P have a built in 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 $25.00 to the standard price.

The current limit setting is inversely related to resistance. Use a 200 ohm, ½ W potentiometer.

Ammeter: Add suffix "A" to model number and $45.00 to price.

Voltmeter: Add suffix "F" to model number and $45.00 to price.

Handles: Add suffix "H" to model number and $30.00 to price.

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

Front Panel Controls: For voltage controls (coarse and fine) mounted on the front panel, instead of the standard screwdriver-slot adjustments at the rear, add suffix "P" to the model number and $25.00 to price. For a current limit control mounted on the front panel, add suffix "Y" to the model number and $15.00 to price.

230 Volt Input: For operation on inputs of 210 to 250 VAC, 50-400 Hz. Add suffix "–230" to model number and $40.00 to price. The "–230" option requires two additional days.

single & dual tracking outputs

Rack Mounting

LINEAR REGULATED
AC-DC

- Shipped Within 9 Days
- All Models U.L. Recognized
- Five Year Warranty

Acopian rack-mounting power supplies feature excellent regulation and ripple specifications in 101 models with outputs up to 150 volts and 60 amps. Metering and overvoltage protection are available as options. These power supplies are constructed in sturdy extruded aluminum assemblies designed expressly for mounting in standard 19″ wide RETMA cabinet racks. The front panels are finished in light gray enamel.

SPECIFICATIONS

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

Remote Voltage Sensing: Provision for sensing the output voltage across the load is a standard feature.

Polarity:

Single Output Models: Output is floating; either positive or negative terminal may be grounded or floated up to 300 volts above ground.
Dual Output Models: Positive output, common, negative output.

Temperature Coefficient:

Single Output Models: 0.015%/°C (Typical).
Dual Output Models: 0.02%/°C (Typical).

Ambient Operating Temperature:

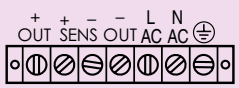
Single Output Models: –20 to +55°C.
Dual Output Models: –10 to +55°C.

Storage Temperature: –55 to +85°C.

Overload/Short Circuit Protection: Foldback current limiting with automatic recovery.

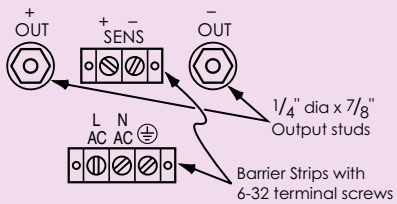
CONNECTIONS (Single Output models)**:**

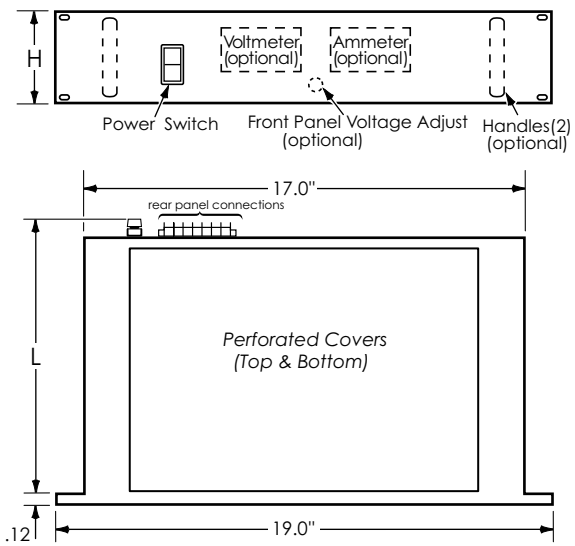
Case sizes 3P11 and 5P12:



3P11 Barrier Strip with 6-32 terminal screws
5P12 Barrier Strip with 8-32 terminal screws

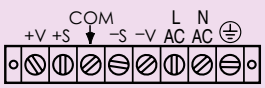
Case sizes 3P17 and 5P17:





Case Size	H	L	Approx. Weight
3P11	3½″	10⅞″	22 lb.
3P17	3½″	16 13/16″	38 lb.
5P12	5¼″	11 15/16″	28 lb.
5P17	5¼″	16 13/16″	53 lb.

CONNECTIONS (Dual Output models)**:**



Barrier Strip with 6-32 terminal screws

SINGLE OUTPUT

Nominal Output Voltage	Adjust Range ± V	Output Current Amps. at 40°C	Output Current Amps. at 55°C	Regulation Load* ±%	Regulation Line* ±%	Ripple mV RMS	($) Price	Model	Case Size
1.5	.5	20	20	.005	.005	.25	520	1.5PT20	3P11
1.5	.5	32	27	.005	.005	.25	635	1.5PH32	5P12
1.5	.25	60	47	.05	.05	1	930	1.5PH60	5P17
2	.5	20	20	.005	.005	.25	520	2PT20	3P11
2	.5	30	25	.005	.005	.25	630	2PH30	5P12
3	.5	20	20	.005	.005	.25	520	3PT20	3P11
3	.5	30	25	.005	.005	.25	635	3PH30	5P12
3	.25	60	47	.05	.05	1	930	3PH60	5P17
3.3	.5	20	20	.005	.005	.25	520	3.3PT20	3P11
3.3	.5	32	27	.005	.005	.25	635	3.3PH32	5P12
3.3	.25	60	47	.05	.05	1	930	3.3PH60	5P17
5	.5	20	20	.005	.005	.25	520	5PT20	3P11
5	.5	32	27	.005	.005	.25	635	5PH32	5P12
5	.25	48	37	.05	.05	1	795	5PT48	3P17
5	.25	60	47	.05	.05	1	930	5PH60	5P17
6	.5	20	20	.005	.005	.25	520	6PT20	3P11
6	.5	28	23	.005	.005	.25	635	6PH28	5P12
6	.25	47	36	.05	.05	1	795	6PT47	3P17
6	.25	58	45	.05	.05	1	930	6PH58	5P17
7	.5	20	20	.005	.005	.25	520	7PT20	3P11
8	.5	20	20	.005	.005	.25	520	8PT20	3P11
8	.5	28	23	.005	.005	.25	635	8PH28	5P12
8	.25	54	42	.05	.05	1	930	8PH54	5P17
9	.5	20	20	.005	.005	.25	520	9PT20	3P11
9	.5	41	32	.05	.05	1	795	9PT41	3P17
9	.5	52	41	.05	.05	1	930	9PH52	5P17
10	.5	20	20	.005	.005	.25	520	10PT20	3P11
10	.5	25	20	.005	.005	.25	635	10PH25	5P12
10	.5	50	39	.05	.05	1	930	10PH50	5P17
12	.5	17	17	.005	.005	.25	520	12PT17	3P11
12	.5	22	22	.005	.005	.25	635	12PH22	5P12
12	.5	33	26	.05	.05	1	795	12PT33	3P17
12	.5	45	35	.05	.05	1	930	12PH45	5P17
13	.5	16	16	.005	.005	.25	520	13PT16	3P11
13	.5	43	34	.05	.05	1	930	13PH43	5P17
14	.5	12	12	.005	.005	.25	520	14PT12	3P11
15	.5	10	10	.005	.005	.25	520	15PT10	3P11
15	.5	19	16	.005	.005	.25	635	15PH19	5P12
15	.5	25	20	.05	.05	1	795	15PT25	3P17
15	.5	40	31	.05	.05	1	930	15PH40	5P17
16	.5	10	10	.005	.005	.25	520	16PT10	3P11
18	.5	10	10	.005	.005	.25	520	18PT10	3P11
18	.5	18	15	.005	.005	.25	635	18PH18	5P12
18	.5	24	19	.05	.05	1	795	18PT24	3P17
18	.5	36	28	.05	.05	1	930	18PH36	5P17
20	.5	10	10	.005	.005	.25	520	20PT10	3P11
20	.5	16	14	.005	.005	.25	635	20PH16	5P12
20	.5	23	18	.05	.05	1	795	20PT23	3P17
20	.5	32	25	.05	.05	1	930	20PH32	5P17
22	.5	10	10	.005	.005	.25	520	22PT10	3P11
24	.5	10	10	.005	.005	.25	520	24PT10	3P11
24	.5	15	13	.005	.005	.25	635	24PH15	5P12
24	.5	20	16	.05	.05	1	795	24PT20	3P17
24	.5	30	23	.05	.05	1	930	24PH30	5P17
25	.5	10	10	.005	.005	.25	520	25PT10	3P11
26	.5	10	10	.005	.005	.25	520	26PT10	3P11
28	.5	10	10	.005	.005	.25	520	28PT10	3P11
28	.5	14	12	.005	.005	.25	635	28PH14	5P12
28	.5	19	15	.05	.05	1	795	28PT19	3P17
28	.5	28	22	.05	.05	1	930	28PH28	5P17
30	.5	10	10	.005	.005	.25	520	30PT10	3P11
30	.5	14	12	.005	.005	.25	635	30PH14	5P12
32	.5	5	5	.005	.005	.25	450	32PT5	3P11
32	.5	10	10	.005	.005	.25	595	32PT10	5P12
34	.5	5	5	.005	.005	.25	460	34PT5	3P11
34	.5	10	10	.005	.005	.25	600	34PT10	5P12
35	.5	5	5	.005	.005	.25	470	35PT5	3P11
35	.5	10	10	.005	.005	.25	615	35PT10	5P12
36	.5	5	5	.005	.005	.25	475	36PT5	3P11
36	.5	10	10	.005	.005	.25	625	36PT10	5P12
38	.5	5	5	.005	.005	.25	485	38PT5	3P11
38	.5	10	10	.005	.005	.25	630	38PT10	5P12
40	.5	5	5	.005	.005	.25	485	40PT5	3P11
40	.5	10	10	.005	.005	.25	645	40PT10	5P12
45	.5	5	5	.005	.005	.25	495	45PT5	3P11
45	.5	10	10	.005	.005	.25	660	45PT10	5P12
48	.5	5	5	.005	.005	.25	495	48PT5	3P11
48	.5	10	10	.005	.005	.25	660	48PT10	5P12
48	.5	15	12	.005	.005	.25	820	48PT15	5P17
50	.5	5	5	.005	.005	.25	495	50PT5	3P11
50	.5	10	10	.005	.005	.25	660	50PT10	5P12
55	.5	5	3.8	.005	.005	.25	505	55PT5	3P11
55	.5	8	6	.005	.005	.25	675	55PT8	5P12
60	.5	5	3.8	.005	.005	.25	510	60PT5	3P11
60	.5	8	6	.005	.005	.25	690	60PT8	5P12
75	1	4	3	.01	.01	1	520	75PT4	3P11
75	1	5.6	4.2	.01	.01	1	715	75PT5	5P12
90	1	3.3	2.5	.01	.01	1	530	90PT3	3P11
90	1	4.4	3.3	.01	.01	1	725	90PT4	5P12
100	1	3	2.2	.01	.01	1	540	100PT3	3P11
100	1	4	3	.01	.01	1	735	100PT4	5P12
120	1	2.5	1.8	.01	.01	1	550	120PT2	3P11
120	1	3.5	2.6	.01	.01	1	745	120PT3	5P12
125	1	2.5	1.8	.01	.01	1	560	125PT2	3P11
125	1	3.5	2.6	.01	.01	1	755	125PT3	5P12
150	1	2.3	1.7	.01	.01	1	560	150PT2	3P11
150	1	3	2.2	.01	.01	1	755	150PT3	5P12

*or 2 mv, whichever is greater.

DUAL TRACKING OUTPUTS

Nominal Output Voltages	Adjust Range ±V	Amps. per Output at 40°C	Amps. per Output at 55°C	Regulation Load ±%	Regulation Line ±%	Ripple mV RMS	($) Price	Model	Case Size
±12	.5	7	5.6	.1	.1	1.5	530	PD12-700	3P11
±12	.5	9	7.2	.1	.1	1.5	645	PD12-900	5P12
±15	.5	7	5.6	.1	.1	1.5	530	PD15-700	3P11
±15	.5	9	7.2	.1	.1	1.5	645	PD15-900	5P12

OPTIONS

EXAMPLE: The Model 5PT20 equipped with all options is designated as the Model V5PT20AFHMP-230. (List suffix letters in alphabetical sequence.)

Overvoltage Protection: An internally installed and preset overvoltage protector is available. On dual output models, if either output fails, both outputs are 'crowbarred'. To order, add prefix "V" to the model number and increase price as follows:

Outputs of	**1.5-70V**	**75-150V**
Case size 3P11	$35.00	$45.00
Other case sizes	$85.00	$95.00

Metering (Single Output Models):
Ammeter: Add suffix "A" to model number and $45.00 to price.
Voltmeter: Add suffix "F" to model number and $45.00 to price.

Metering (Dual Output Models):
Ammeters: One for each output. Add suffix "A" to model number and $90.00 to price. "A" and "F" options cannot be combined in one power supply.
Voltmeters: One for each output. Add suffix "F" to model number and $90.00 to price. "A" and "F" options cannot be combined in one power supply.
Voltmeter and Ammeter: Each with switch for selecting output to be monitored. Add suffix "G" to model number and $140.00 to price.

Handles: Add suffix "H" to model number and $30.00 to price.

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

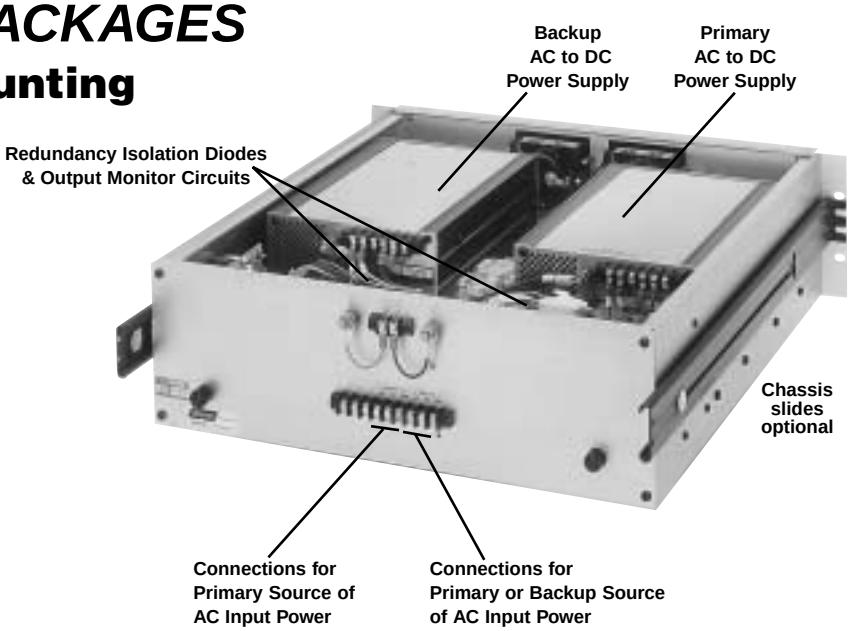
Front Panel Voltage Adjustment: Standard models have a voltage adjustment located at the rear. A voltage control mounted on the front panel is available as an option. To order, add suffix "P" to the model number and $15.00 to price.

230 Volt Input: For operation on inputs of 210 to 250 VAC, 50-400 Hz. Add suffix "–230" to model number and $40.00 to price. The "–230" option requires two additional days.

REDUNDANT POWER PACKAGES

Rack Mounting & Wall Mounting

AC-DC



LINEAR (PAGES 44 & 45)
SWITCHING (PAGES 46 & 47)

- Shipped Within 9 Days
- All Models U.L. Recognized
- Five Year Warranty

Output Redundancy: Each Redundant Power Package contains two identical power supplies with their outputs interconnected through a diode switching arrangement that will detect any fault condition, isolate it from the system output, and pass only the output of the other supply with no interruption of output power during the transition.

Input Redundancy: All Acopian Redundant Power Packages may be operated with only one AC power source. However, two isolated sets of AC input connections are provided, so that two independent sources of input power may be used, to obtain the additional protection of input redundancy. A battery-backup power source (UPS) and/or a second power line from the power utility can be used to maintain output power without interruption when your primary source of AC power fails.

Serviceability: A defective power supply can be rapidly and safely changed while the Redundant Power Package continues to furnish uninterrupted power to the load. All input, output and alarm-contact connections are at the rear of the assembly for Rack Mounting models or on the front for Wall Mounting models. For Rack Mounting models, the chassis slides and handles options are recommended for applications where it is desired to service the Redundant Power Package without removing it from the rack.

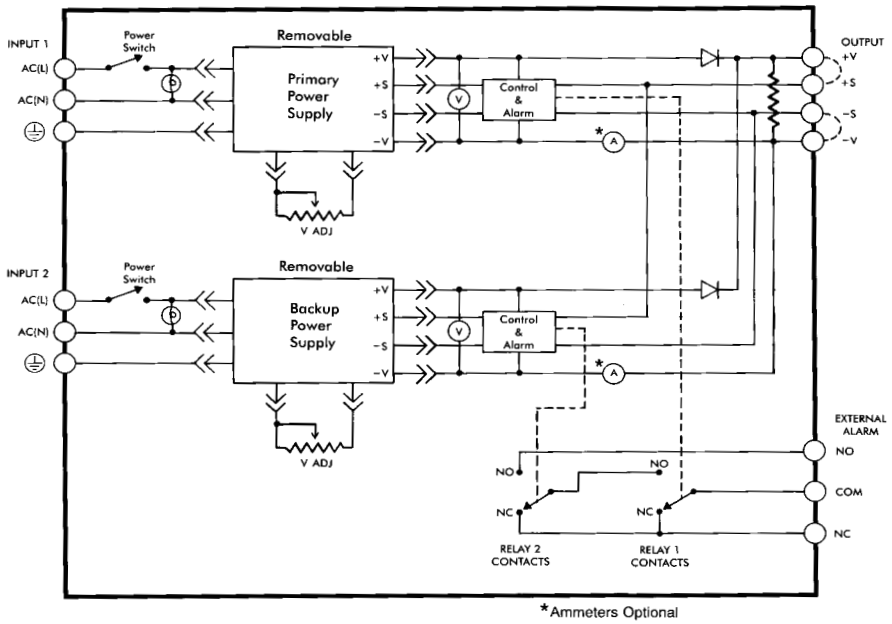
Applications: Redundant Power Packages should be considered for any equipment where the highest attainable reliability is essential, and an unexpected loss of power would be disastrous. Such applications include communications systems (both voice and data types), computer systems (volatile memory systems in particular), process controls, utility and municipal systems, and security/safety alarm systems.

Theory of Operation: Each Redundant Power Package consists of the two power supplies installed in either a Rack Mounting or Wall Mounting assembly. The output voltage of the primary supply is set approximately 0.2 volt higher than that of the backup supply. Under this condition, the backup supply's diode is not forward biased; only the primary supply delivers current to the load. If the output voltage of the primary supply decreases by more than 0.2 volt, the situation is reversed and only the backup supply delivers load current. There is no interruption of output power during the transition.

Monitoring Circuitry: The Redundant Power Package contains two voltage monitoring circuits with relays, contacts of which are available to control external failure alarms or other circuitry. The contact wiring of the two relays is connected in cascade, to simulate a single set of Form C contacts which switches if the output voltage of either power supply decreases by more than 2.0 volts (3.0 volts for outputs over 48 volts) from the nominal rating.

Overvoltage Protection: Each power supply contains an overvoltage protection circuit, to assure that neither power supply output will significantly exceed the nominal output voltage rating under any condition, including incorrect application and misadjustment.

Simplified Diagram
for Switching & Linear
Redundant Power Packages



SPECIFICATIONS (for linear & switching)

Input Voltage: (A separate set of AC input terminals is provided for each power supply, so that if two sources of AC input power are available, one may be used for each supply and so reduce the possibility of output dropout due to loss of input power.)

Linear: 105-125 VAC, 50-400 Hz, single phase.
Switching: 90-132 VAC, 49-61 Hz, single phase.
For models R24W7, RWL24W7, R28W7, RWL28W7, R48W7 and RWL48W7, the use of 30A lines is recommended.
When operating on 50 Hz input, derate output by 5%.

Remote Voltage Sensing: Provision for sensing the output voltage across the load, so that drops in the load line are compensated, is a standard feature.

Output Voltage:
Normal mode: Nominal voltage shown in table.
Backup mode: 0.2 volt less than nominal voltage shown in table.

Output Regulation:
Line: ±0.05%
Load: ±0.05% (Dynamic regulation - does not include 0.2 volt shift which occurs during switchover to lower-set backup supply.)

Load Protection: Overvoltage protection.

Overload/Short Circuit Protection: Foldback current limiting with automatic recovery.

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

Output Metering: A separate voltmeter for each output (standard). Ammeters available; see Options.

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

Ambient Operating Temperature:

Linear: –20 to +71°C.
Switching: 0 to +71°C.

Storage Temperature:

Linear: –55 to +85°C.
Switching: –40 to +85°C.

LINEAR REGULATED
Redundant Power Packages
Rack Mounting & Wall Mounting

AC-DC
single output

- Shipped Within 9 Days
- All Models U.L. Recognized
- Five Year Warranty

Rack Mounting

(Ammeters, handles and audible alarms optional)

An Acopian Redundant Power Package is installed by simply connecting the AC input and DC output terminals. All wiring (including isolation diodes, output monitor circuits, switches, meters, adjustments and connectors) has been done for you.

For Specifications and other information, see pages 42 & 43.

OPTIONS

Add option suffixes in alphabetical order. Example: R5H16AH-230.

Ammeters: One for each output. For models in case sizes 3R14 and 317R18 two volt/ammeters, each with switch, are substituted for the standard voltmeters. Add suffix "A" to model number and $90.00 to price.

Audible Alarms: Piercing whistle alerts personnel to a voltage lower than normal. Front panel mounted, one for each power supply. Units with this option do not have provision for control of an external alarm. To order, add suffix "K" to model number and $90.00 to price.

Handles (for Rack Mounting models)**:** Add suffix "H" to model number and $30.00 to price.

Terminal Strip Cover: Clips on.
Wall Mounting models: Standard.
Rack Mounting models: To order, add suffix "M" to model number and $10.00 to price.

Chassis Slides (for Rack Mounting models)**:** For racks having rear mounting rails spaced 20˝ to 26˝ behind the front panel. To order, add suffix "S" to model number and $90.00 to price.

230 Volt Input: For operation on inputs of 210-250 VAC, 50-400 Hz. To order, add suffix "–230" to model number and $75.00 to price. Requires two additional days.

Linear Regulated REDUNDANT POWER PACKAGES

Nominal Output Voltage	Adjust Range ±V	Output Current Amps. at 40°C	55°C	71°C	Ripple mV RMS	Rack Mounting Models ($) Price	Model	Case Size	Wall Mounting Models ($) Price	Model	Case Size
5	.5	2.6	2.5	2.4	1	1095	R5N8X	3R14	1395	RWL5N8X	317R18
5	.5	5.3	4.4	3.5	1	1195	R5M6	5R14	1495	RWL5M6	517R18
5	.5	11	9.3	7.5	1	1295	R5M13	5R18	1595	RWL5M13X	517R20
5	.5	21	17	14	1	1495	R5H11	7R18	1795	RWL5H11	719R20
5	.5	28	23	19	1	1695	R5H16	7R20	1995	RWL5H16	719R25
12	.5	1.5	1.5	1.5	1	1095	R12N8X	3R14	1395	RWL12N8X	317R18
12	.5	3.5	3	2.5	1	1195	R12M6	5R14	1495	RWL12M6	517R18
12	.5	8	7.5	7	1	1295	R12M13	5R18	1595	RWL12M13X	517R20
12	.5	16	13.8	11.2	1	1495	R12H11	7R18	1795	RWL12H11	719R20
12	.5	20	17	14.2	1	1695	R12H16	7R20	1995	RWL12H16	719R25
15	.5	1.5	1.5	1.5	1	1095	R15N8X	3R14	1395	RWL15N8X	317R18
15	.5	4	3.8	3.6	1	1195	R15M9	5R14	1495	RWL15M9	517R18
15	.5	6.5	6	5.5	1	1295	R15M13	5R18	1595	RWL15M13X	517R20
15	.5	14.7	12.5	10.3	1	1495	R15H11	7R18	1795	RWL15H11	719R20
15	.5	18.7	16	13.3	1	1695	R15H16	7R20	1995	RWL15H16	719R25
24	.5	.9	.9	.9	1	1095	R24N8X	3R14	1395	RWL24N8X	317R18
24	.5	3	2.7	2.4	1	1195	R24M9	5R14	1495	RWL24M9	517R18
24	.5	5	5	5	1	1295	R24M13	5R18	1595	RWL24M13X	517R20
24	.5	11.7	10.2	8.7	1	1495	R24H11	7R18	1795	RWL24H11	719R20
24	.5	14.7	12.7	10.7	1	1695	R24H16	7R20	1995	RWL24H16	719R25
28	.5	1	1	1	1	1095	R28N8X	3R14	1395	RWL28N8X	317R18
28	.5	2.7	2.6	2.5	1	1195	R28M9	5R14	1495	RWL28M9	517R18
28	.5	5	5	5	1	1295	R28M13	5R18	1595	RWL28M13X	517R20
28	.5	10.5	9.2	8	1	1495	R28H11	7R18	1795	RWL28H11	719R20
28	.5	14	12	10	1	1695	R28H16	7R20	1995	RWL28H16	719R25
48	.5	.4	.4	.4	1	1130	R48N8T	3R14	1430	RWL48N8T	317R18
48	.5	1.6	1.4	1.2	1	1240	R48M9	5R14	1540	RWL48M9	517R18
48	.5	3	3	3	1	1340	R48M13	5R18	1640	RWL48M13X	517R20
48	.5	6	5	4	1	1545	R48H11	7R18	1845	RWL48H11	719R20
48	.5	8.5	7.2	5.5	1	1835	R48H16	7R20	2135	RWL48H16	719R25
60	1	.25	.25	.25	1	1160	R60N8T	3R14	1460	RWL60N8T	317R18
60	1	1	.9	.8	1	1270	R60M9	5R14	1570	RWL60M9	517R18
60	1	2.5	2.1	1.7	1	1370	R60M13	5R18	1670	RWL60M13X	517R20
60	1	5	4.1	3.3	1	1575	R60H11	7R18	1875	RWL60H11	719R20
60	1	7	5.8	4.6	1	1845	R60H16	7R20	2145	RWL60H16	719R25
120	1	.12	.12	.12	1	1180	R120N8T	3R14	1480	RWL120N8T	317R18
120	1	.5	.5	.4	1	1295	R120M6	5R14	1595	RWL120M6	517R18
120	1	1.2	1.1	1	1	1400	R120M13	5R18	1700	RWL120M13X	517R20
120	1	2.5	2	1.6	1	1615	R120H11	7R18	1915	RWL120H11	719R20
120	1	3.5	2.9	2.3	1	1890	R120H16	7R20	2190	RWL120H16	719R25
125	1	.12	.12	.12	1	1200	R125N8T	3R14	1500	RWL125N8T	317R18
125	1	.4	.4	.4	1	1315	R125M6	5R14	1615	RWL125M6	517R18
125	1	1.2	1.1	1	1	1420	R125M13	5R18	1720	RWL125M13X	517R20
125	1	2.4	1.9	1.5	1	1635	R125H11	7R18	1935	RWL125H11	719R20
125	1	3.4	2.8	2.3	1	1910	R125H16	7R20	2210	RWL125H16	719R25

Wall Mounting

(Ammeters optional)

PARALLELABLE "SEMISYSTEM" POWER SUPPLIES

LINEAR REGULATED

Two units connected in parallel function the same as a Redundant Power Package.

SHIPPED WITHIN 9 DAYS
FIVE YEAR WARRANTY
ALL MODELS U.L. RECOGNIZED

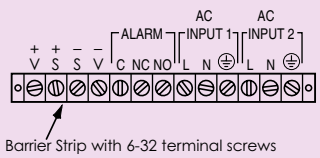
CASE SIZES:

Rack Mounting:

3R14	3½″ x 19″ panel, 14 13/16″ deep. (15 lb.)
5R14	5¼″ x 19″ panel, 14 13/16″ deep. (23 lb.)
5R18	5¼″ x 19″ panel, 17⅞″ deep. (29 lb.)
7R18	7″ x 19″ panel, 18½″ deep. (50 lb.)
7R20	7″ x 19″ panel, 20½″ deep. (64 lb.)

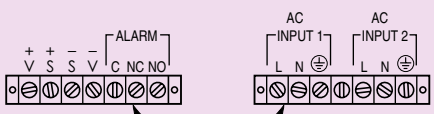
Wall Mounting: See page 47.

CONNECTIONS FOR CASE SIZES
3R14, 317R18, 5R14, 5R18, 517R18 and 517R20:



Barrier Strip with 6-32 terminal screws

CONNECTIONS FOR CASE SIZES
7R18, 7R20, 719R20, and 719R25:



Barrier Strips with 8-32 terminal screws

Each supply contains a voltmeter, isolation diodes, a voltage monitor circuit providing contacts for control of an external alarm (or built-in audible alarm) and overvoltage protection circuit, so that two paralleled units are functionally equivalent to a Redundant Power Package. All connections are by means of a Jones connector (mate provided), so that one supply may be quickly, easily and safely installed in or removed from the rack while another provides uninterrupted power to the load. For a redundant system, order two units.

Specifications: Same as shown under SPECIFICATIONS on page 43 for Linear Redundant Power Packages.
Case Size: 5¼″ x 19″ panel, 16 13/16″ deep. (53 lbs.)
To allow for mating connector and radius of wiring, mounting space should be at least 20″ deep.

PARALLELABLE "SEMISYSTEM" POWER SUPPLIES
Linear Regulated
For a redundant system, order two units.

Nominal Output Voltage	Adjust Range ±V	Output Current Amps. at 40°C	Output Current Amps. at 55°C	Ripple mV RMS	($) Price	Model	Case Size
5	.5	55	43	1	1095	R5PH17	5R17
12	.5	41	32	1	1095	R12PH17	5R17
15	.5	37	29	1	1095	R15PH17	5R17
24	.5	28	22	1	1095	R24PH17	5R17
28	.5	27	21	1	1095	R28PH17	5R17
48	.5	15	12	1	1095	R48P17	5R17

OPTIONS
Add option suffixes in alphabetical order.
Ammeter: Add suffix letter "A" to model number and $45.00 to unit price.
Handles: Add suffix "H" to model number and $30.00 to unit price.
Audible Alarm: Whistle alerts personnel to voltage lower than normal. Front panel mounted. Units with this option do not have provision for control of an external alarm. Add suffix "K" to model number and $45.00 to unit price.
230 Volt Input: For operation on inputs of 210-250 VAC, 50-400 Hz. To order, add suffix "–230" to model number and $40.00 to unit price. Requires two additional days.

SWITCHING REGULATED Redundant Power Packages

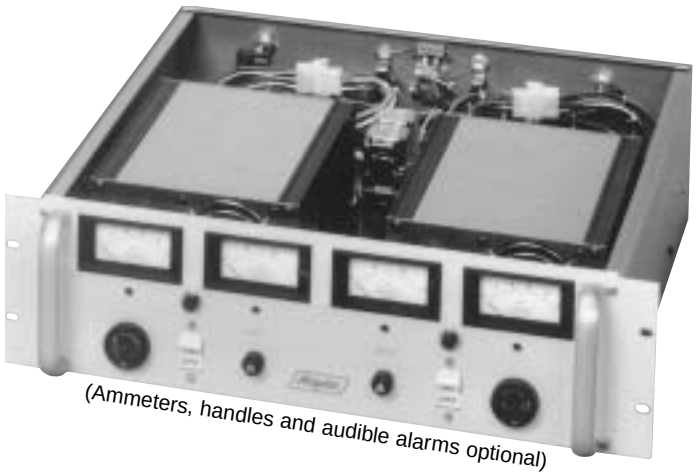
Rack Mounting & Wall Mounting

AC-DC
single output

- Shipped Within 9 Days
- All Models U.L. Recognized
- Five Year Warranty

An Acopian Redundant Power Package is installed by simply connecting the AC input and DC output terminals. All wiring (including isolation diodes, output monitor circuits, switches, meters, adjustments and connectors) has been done for you.

Rack Mounting



(Ammeters, handles and audible alarms optional)

For Specifications and other information, see pages 42 & 43.

OPTIONS

Add option suffixes in alphabetical order. Example: R12W6AH-230.

Ammeters: One for each output. Add suffix letter "A" to model number and $90.00 to price.

Audible Alarms: Piercing whistle alerts personnel to a voltage lower than normal. Front panel mounted, one for each power supply. Units with this option do not have provision for control of an external alarm. To order, add suffix "K" to model number and $90.00 to price.

Handles (for Rack Mounting models)**:** Add suffix "H" to model number and $30.00 to price.

Terminal Strip Cover: Clips on.
Wall Mounting models: Standard.
Rack Mounting models: To order, add suffix "M" to model number and $10.00 to price.

Chassis Slides (for Rack Mounting models)**:** For racks having rear mounting rails spaced 20″ to 26″ behind the front panel. To order, add suffix "S" to model number and $90.00 to price.

230 Volt Input: For operation on inputs of 180-264 VAC, 49-61 Hz. To order, add suffix "–230" to model number and $100.00 to price. Requires two additional days.

Rack Mounting Case Sizes:

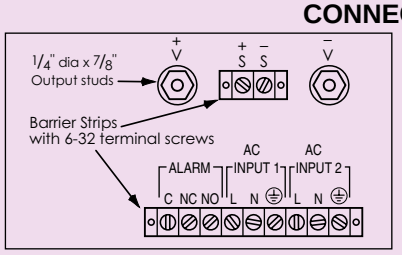
5RW16 5¼″ x 19″ panel, 16 13/16″ deep. (21 lb.)
5RW18 5¼″ x 19″ panel, 18 13/16″ deep. (27 lb.)
5RW22 5¼″ x 19″ panel, 22 13/16″ deep. (32 lb.)

Wall Mounting Case Sizes: See page 47.

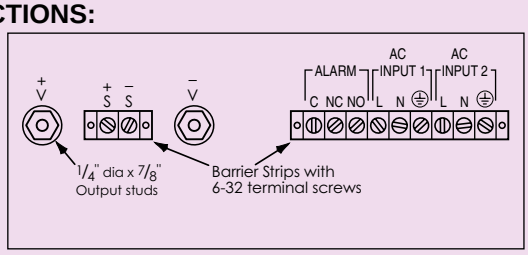
Switching Regulated REDUNDANT POWER PACKAGES

Nominal Output Voltage	Adjust Range ±V	Output Current Amps. at 40°C	55°C	71°C	Ripple mV (@ 25 MHz BW) RMS	P-P	Rack Mounting Models ($) Price	Model	Case Size	Wall Mounting Models ($) Price	Model	Case Size
12	.5	26	22	18	15	100	1995	R12W6	5RW16	2295	RWL12W6	519RW15
12	.5	41	35	28	15	100	2395	R12W9	5RW18	2695	RWL12W9	519RW18
12	.5	61	52	42	15	100	2795	R12G7	5RW22	3095	RWL12G7	522RW17
15	.5	21	18	15	15	100	1995	R15W6	5RW16	2295	RWL15W6	519RW15
15	.5	33	28	23	15	100	2395	R15W9	5RW18	2695	RWL15W9	519RW18
15	.5	49	42	34	15	100	2795	R15G7	5RW22	3095	RWL15G7	522RW17
24	.5	15	13	11	15	100	1995	R24W6	5RW16	2295	RWL24W6	519RW15
24	.5	24	21	17	15	100	2395	R24W9	5RW18	2695	RWL24W9	519RW18
24	.5	36	31	25	15	100	2795	R24G7	5RW22	3095	RWL24G7	522RW17
24	.5	50	42	35	15	100	2995	R24W7	5RW22	3295	RWL24W7	522RW17
28	.5	13	11	9	15	100	1995	R28W6	5RW16	2295	RWL28W6	519RW15
28	.5	20	17	14	15	100	2395	R28W9	5RW18	2695	RWL28W9	519RW18
28	.5	30	26	21	15	100	2795	R28G7	5RW22	3095	RWL28G7	522RW17
28	.5	42	35	29	15	100	2995	R28W7	5RW22	3295	RWL28W7	522RW17
48	.5	8	7	5	25	150	1995	R48W6	5RW16	2295	RWL48W6	519RW15
48	.5	12	10	8	25	150	2395	R48W9	5RW18	2695	RWL48W9	519RW18
48	.5	19	16	13	25	150	2795	R48G7	5RW22	3095	RWL48G7	522RW17
48	.5	25	21	17	25	150	2995	R48W7	5RW22	3295	RWL48W7	522RW17

CONNECTIONS:



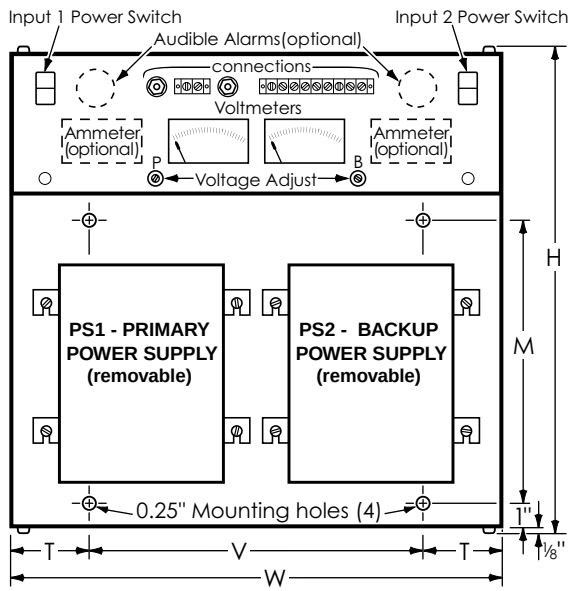
RACK MOUNTING



WALL MOUNTING

Wall Mounting

Wall Mounting Case Sizes:



Case Size	H	W	M	V	T	Depth	Approx. Weight
317R18	18½″	17	11	14	1½	4¼	18 lb.
517R18	18½″	17	11	14	1½	6	22-26 lb.
517R20	20½″	17	13	13	2	6	34 lb.
519RW15	15½″	19	8	13	3	6 1/16	24 lb.
519RW18	18½″	19	11	13	3	6 1/16	27 lb.
522RW17	17¼″	22½	10	16½	3	6 1/16	33 lb.
719R20	20½″	19	13	13	3	7¾	58 lb.
719R25	25½″	19	18	13	3	7¾	70 lb.

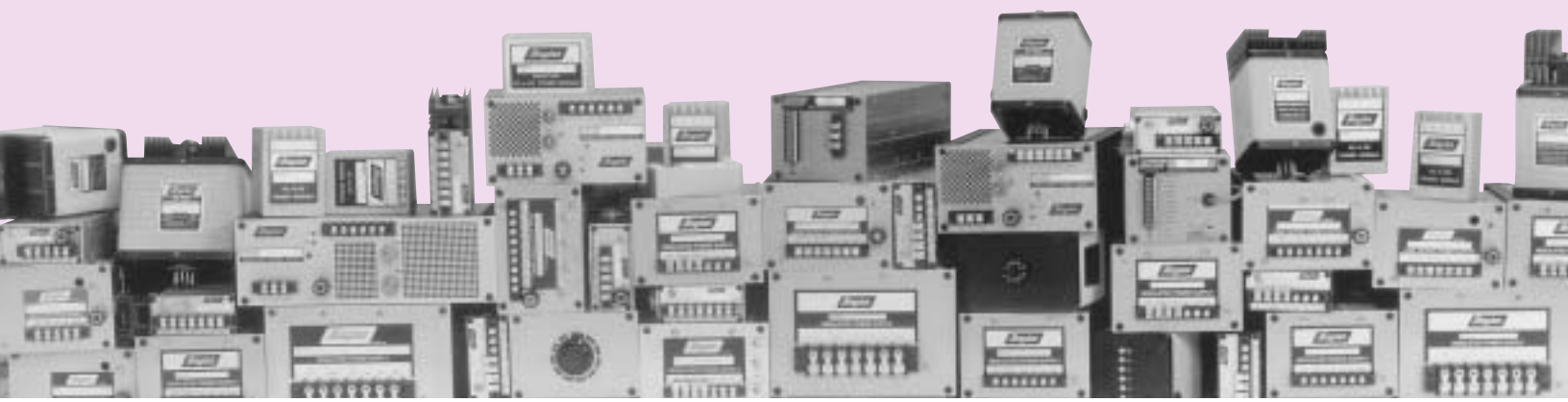
Find Power Supply by Model Number

Over 100,000 different Acopian model numbers are possible considering all the different combinations of outputs, inputs and options available. However, **by matching the model number format of the power supply you are looking for with the model number format from the list below, you will be able to find the page it is on.**

- In the model number that you are looking for, use the letters to match the format below. (The numbers(#), which indicate voltage and current, will vary depending on your particular model number. The letters do not vary.)
- Ignore V or 3V if it is in the front of the model number you are looking for.
- Option letter prefixes E and R are included with parenthesis around them, (E) and (R), in the list below.
- Ignore any of these option letters/numbers which may appear at the end of the model number you are looking for: A,F,G,H,K,L,M,P,S,T,Y or -230.

POWER SYSTEMS

CONTAINING ANY POWER MODULES YOU NEED



SHIPPED TO YOU IN JUST 9 DAYS

Design your Power System on the phone

Fill your requirements for completely wired multiple-output Power Systems without preparing time consuming mechanical layouts, detailed purchase requisitions or searching through a power supply catalog. **Simply call Acopian and specify the output voltages and currents and any operating features that you require.**

Acopian production expertise assures that each system will be completely wired, tested and **shipped within 9 days** after receipt of your order.

SHIPPED WITHIN 9 DAYS

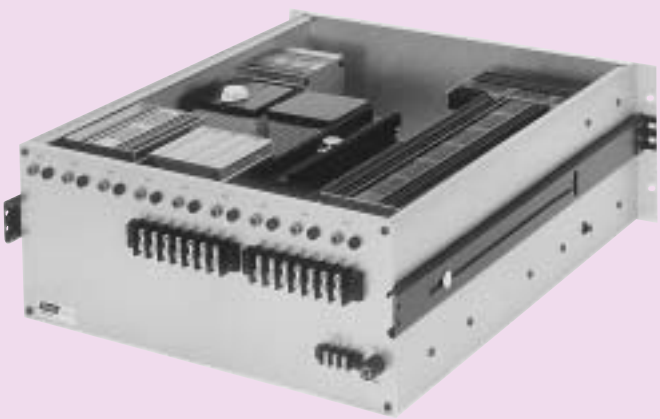
Four outputs, each separately switched, are provided by this 5¼″ high assembly. The voltmeter and ammeter may be switched to monitor any output.

Ordering an Acopian Power System is this easy:

- *List the DC output ratings you require. Or, select the power modules that you wish to be included. Any module in this catalog can be used.*
- *Also list any assembly features you would like included - output controls, meters, test points, switches, handles, chassis slides, etc.*
- *Determine if any size restrictions (assembly height or depth) would be necessary.*
- *Call Acopian and ask for the Power Systems Dept.*
- *An Acopian Applications Engineer will answer - on the phone - any questions which you may have.*
- *A distinctive system model number will be assigned, and a firm price will be quoted. Your completely-wired power supply system will be **shipped within 9 days**.*

Shown are just a few examples of the unlimited variety of assemblies that Acopian can build and ship in 9 DAYS.

This system provides seven isolated outputs and occupies only 3½″ of rack space.



Test points for all outputs, in addition to screw terminals for all input and output connections, are on the rear panel of this 7″ high assembly. Chassis slides permit easy access.

Front panel adjustments, each with a shaft lock to prevent accidental changes, permit easy calibration of the eight outputs provided by this 7″ high assembly.

Plug-in

SINGLE OUTPUT & WIDE ADJUST OUTPUT

LINEAR REGULATED
AC-DC

Optional solder terminals.
See OPTIONS, on page 51.

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

An Acopian Plug-in power module can be installed in a matter of seconds. Simply plug it into a standard octal socket. No other mounting is required. (Threaded mounting holes are provided in the base for fastening the module when used in other than the upright position, or if subject to extreme vibration.)

To replace a module - for example, where added circuitry calls for a higher current rating - just unplug the old, plug in the new. No need to touch any wiring. And as a result of years of product refinement, your Acopian Plug-in provides the highest reliability of any available series-regulated power supply.

STANDARD FEATURES

- May be used in series
- Delivers current surges without damage - to protect against prolonged overload and shorts, use of an input fuse is recommended
- No derating or additional heat sinking required
- Completely serviceable
- Lightweight

SPECIFICATIONS

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

Output Specifications: See pages 52-53.

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

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

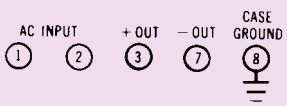
Ambient Operating Temperature: –10 to +65°C.
No derating required.

MIL Tested / Increased Temperature Range:
See page 51.

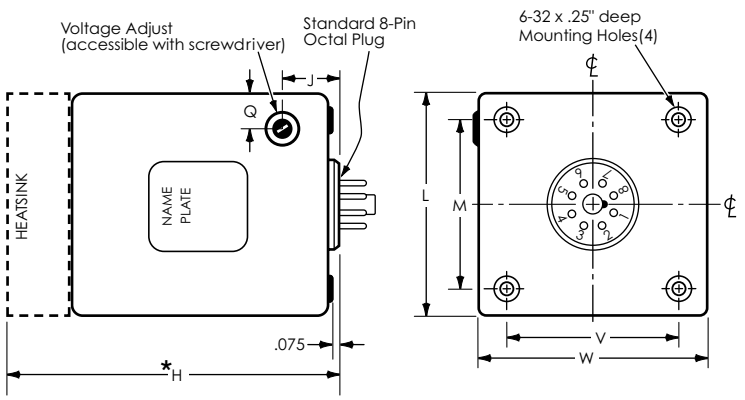
Storage Temperature: –55 to +85°C.

Installation: Plugs into standard 8-pin octal socket (see page 55). Four mounting holes (6-32) are provided in the base for fastening the module when used in other than the upright position, or if extreme vibration will be encountered.

PIN CONNECTIONS:
Standard model.



STANDARD - Plug-in



*H dimension includes HEATSINK on BS, US, WS, and HS case sizes.

Case Size	L	W	H*	M	V	J	Q	Approx. Weight
AS	3.40	3.28	4.67	2.625	2.625	1.00	.66	2 lb. 8 oz.
BS	3.40	3.28	5.33	2.625	2.625	1.00	.66	2 lb. 14 oz.
TS	3.33	4.15	4.85	2.562	2.750	1.12	.62	3 lb. 6 oz.
US	3.33	4.15	5.53	2.562	2.750	1.12	.62	3 lb. 8 oz.
WS	3.40	5.02	5.53	2.562	3.562	1.12	.62	4 lb. 14 oz.
HS	3.40	5.02	6.65	2.562	3.562	1.12	.62	5 lb.

MIL TESTED EXTENDED TEMP RANGE

SHIPPED WITHIN 3 DAYS

ALL MODELS U.L. RECOGNIZED

Ruggedized construction and capability for operation through an extended ambient temperature range of –20 to +71°C (without derating) are provided by Acopian MIL-option supplies. In all other respects they are identical to standard plug-in power supplies.

HOW TO ORDER:

Add prefix "MIL-" to standard model number and $15.00 to price of single output models; $30.00 to price of dual output models. Example: Model 6J200 becomes MIL-6J200. Price becomes $175.00 plus $15.00; or $190.00 total.

MIL-option equivalents to all the models included on pages 50 through 56, except those housed in case size HS, have been tested to these specifications:

ALTITUDE: MIL-STD-810B, Method 500, Procedure II.

VIBRATION: MIL-STD-810B, Method 514, Procedure I, Curve D.

SHOCK: MIL-STD-810B, Method 516, Procedure I.

FUNGUS: (additional $15.00/output charge applies.) MIL-STD-810B, Method 508, Procedure I.

CONDUCTED EMI: MIL-I-6181D, Paragraph 4.3.1., Figure II.

RADIATED EMI: MIL-I-6181D, Paragraph 4.3.2.

SUSCEPTIBILITY TO CONDUCTED AND RADIATED EMI: MIL-I-6181D, Paragraph 4.3.4.

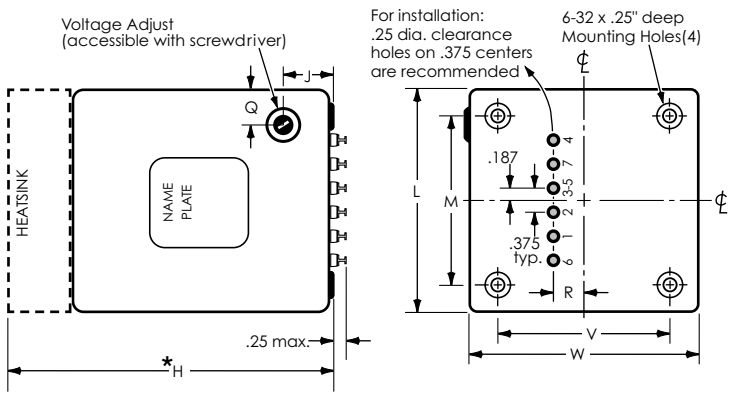
HIGH TEMPERATURE: MIL-STD-810B, Method 501, Procedure I.

LOW TEMPERATURE: MIL-E-5272C, Paragraph 4.2.2, Procedure II.

HUMIDITY: MIL-STD-810B, Method 507, Procedure I.

SALT FOG: MIL-STD-810B, Method 509, Procedure I.

OPTIONAL - Solder terminals



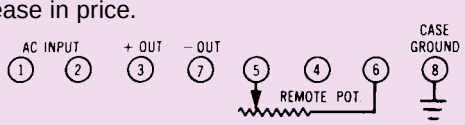
*H dimension includes HEATSINK on BSL, USL, WSL, and HSL case sizes.

Case Size	L	W	H*	M	V	J	Q	R	Approx. Weight
ASL	3.40	3.28	4.60	2.625	2.625	.93	.66	.34	2 lb. 8 oz.
BSL	3.40	3.28	5.26	2.625	2.625	.93	.66	.34	2 lb. 14 oz.
TSL	3.33	4.15	4.78	2.562	2.750	1.05	.62	.75	3 lb. 6 oz.
USL	3.33	4.15	5.47	2.562	2.750	1.05	.62	.75	3 lb. 8 oz.
WSL	3.40	5.02	5.47	2.562	3.562	1.05	.62	1.37	4 lb. 14 oz.
HSL	3.40	5.02	6.58	2.562	3.562	1.05	.62	1.37	5 lb.

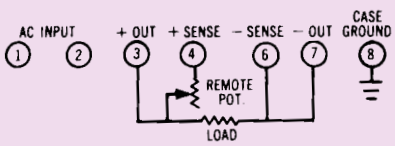
OPTIONS

Solder Terminals: All models can be furnished with solder terminals instead of the octal type plug. To order, add suffix "L" to model number and $30.00 to price. Example: Model 12J100 becomes Model 12J100L. To determine dimensions of case with terminals, add suffix "L" to case size code indicated. Example: AS becomes ASL.

Remote Output Adjustment: All models have a local voltage adjustment. When provision for remote (external) adjustment is also desired, add prefix "E" to model number. Example: Model 12J100 becomes Model E12J100. No increase in price.



Remote Sensing: Provision for remote sensing of the output voltage to compensate for drops in the load lines can be furnished at an additional charge of $10.00 per unit. Add prefix "R" to model number when ordering. "R" power supplies have a local voltage adjustment and provision for remote (external) output adjustment.



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

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 200 volt outputs.

SINGLE OUTPUT PLUG-IN (1- 35 volt)

Nominal Output Voltage	Adjust Range ± V	Output Current Amps.	Regulation Load ± %	Regulation Line ± %	Ripple mV RMS	($) Price	Model	Case Size
1	.25	.100	.25	.05	0.5	115	1J10	AS
1.5	.5	.200	.4	.05	1	115	1.5J20	AS
1.5	.5	.400	.5	.05	1	125	1.5J40	AS
1.5	.5	.750	.7	.05	1	135	1.5J75	AS
2.5	.5	.200	.4	.05	1	115	2.5J20	AS
2.5	.5	.400	.5	.05	1	125	2.5J40	AS
2.5	.5	.750	.7	.05	1	135	2.5J75	AS
3.3	.5	.200	.3	.05	1	115	3.3J20	AS
3.3	.5	.400	.5	.05	1	125	3.3J40	AS
3.3	.5	.750	.7	.05	1	135	3.3J75	AS
3.3	.5	1.0	.5	.05	1	145	3.3J100	AS
3.3	.5	1.5	.5	.05	1	160	3.3J150	US
3.3	.5	2.0	.5	.05	1	175	3.3J200	WS
3.3	.5	3.0	.5	.05	1	195	3.3J300	WS
3.3	.5	4.0	.5	.05	1	215	3.3J400	HS
4	1	.200	.2	.05	1	115	4J20	AS
4	1	.400	.3	.05	1	125	4J40	AS
4	1	.750	.4	.05	1	135	4J75	AS
4	.5	1.0	.5	.05	1	145	4J100	AS
4	.5	1.5	.5	.05	1	160	4J150	US
4	.5	2.0	.5	.05	1	175	4J200	WS
4	.5	3.0	.5	.05	1	195	4J300	WS
4	.5	4.0	.5	.05	1	215	4J400	HS
5	1	.200	.2	.05	1	115	5J20	AS
5	1	.400	.3	.05	1	125	5J40	AS
5	1	.750	.4	.05	1	135	5J75	AS
5	.5	1.0	.5	.05	1	145	5J100	AS
5	.5	1.5	.4	.05	1	160	5J150	US
5	.5	2.0	.5	.05	1	175	5J200	WS
5	.5	3.0	.5	.05	1	195	5J300	WS
5	.5	4.0	.5	.05	1	215	5J400	HS
5	.5	5.0	.7	.05	1	230	5J500	HS
6	1	.100	.05	.05	1	105	6J10	AS
6	1	.200	.05	.05	1	115	6J20	AS
6	1	.400	.15	.05	1	125	6J40	AS
6	1	.750	.3	.05	1	135	6J75	AS
6	1	1.0	.3	.05	1	145	6J100	AS
6	1	1.5	.3	.05	1	160	6J150	US
6	.5	2.0	.3	.05	1	175	6J200	WS
6	.5	3.0	.5	.05	1	195	6J300	WS
6	.5	4.0	.5	.05	1	215	6J400	HS
6	.5	5.0	.7	.05	1	230	6J500	HS
8	1	.200	.05	.05	0.5	115	8J20	AS
8	1	.400	.1	.05	1	125	8J40	AS
8	1	.750	.2	.05	1	135	8J75	AS
8	1	1.0	.2	.05	1	150	8J100	AS
8	1	1.5	.3	.05	1	175	8J150	US
8	.5	2.0	.3	.05	1	200	8J200	WS
8	.5	3.0	.25	.05	1	230	8J300	HS
9	1	.200	.05	.05	0.5	115	9J20	AS
9	1	.400	.1	.05	1	125	9J40	AS
9	1	.750	.15	.05	1	135	9J75	AS
9	1	1.0	.2	.05	1	150	9J100	AS
9	1	1.5	.3	.05	1	175	9J150	US
9	.5	2.0	.2	.05	1	200	9J200	WS
9	.5	3.0	.25	.05	1	230	9J300	HS
10	1	.200	.05	.05	0.5	115	10J20	AS
10	1	.400	.1	.05	1	125	10J40	AS
10	1	.750	.15	.05	1	135	10J75	AS
10	1	1.0	.2	.05	1	150	10J100	AS
10	1	1.5	.25	.05	1	175	10J150	US
10	.5	2.0	.15	.05	1	200	10J200	WS
10	.5	3.0	.25	.05	1	230	10J300	HS
12	1	.200	.05	.05	0.5	115	12J20	AS
12	1	.400	.1	.05	1	125	12J40	AS
12	1	.750	.15	.05	1	135	12J75	AS
12	1	1.0	.1	.05	1	150	12J100	AS
12	1	1.5	.2	.05	1	175	12J150	US
12	.5	2.0	.1	.05	1	200	12J200	WS
12	.5	3.0	.25	.05	1	230	12J300	HS
15	1	.100	.05	.05	0.5	105	15J10	AS
15	1	.200	.05	.05	0.5	115	15J20	AS
15	1	.400	.1	.05	1	125	15J40	AS
15	1	.750	.15	.05	1	135	15J75	AS
15	1	1.0	.15	.05	1	150	15J100	AS
15	1	1.5	.2	.05	1	175	15J150	US
15	.5	2.0	.1	.05	1	200	15J200	WS
15	.5	3.0	.25	.05	1	230	15J300	HS

Nominal Output Voltage	Adjust Range ± V	Output Current Amps.	Regulation Load ± %	Regulation Line ± %	Ripple mV RMS	($) Price	Model	Case Size
16	1	.100	.05	.05	0.5	105	16J10	AS
16	1	.200	.05	.05	0.5	115	16J20	AS
16	1	.400	.1	.05	1	125	16J40	AS
16	1	.750	.15	.05	1	135	16J75	AS
16	1	1.0	.15	.05	1	150	16J100	AS
16	.5	2.0	.1	.05	1	200	16J200	WS
18	1	.100	.05	.05	0.5	105	18J10	AS
18	1	.200	.05	.05	0.5	115	18J20	AS
18	1	.400	.1	.05	1	125	18J40	AS
18	1	.750	.15	.05	1	135	18J75	AS
18	1	1.0	.15	.05	1	150	18J100	US
18	.5	2.0	.1	.05	1	200	18J200	WS
20	1	.100	.05	.05	0.5	105	20J10	AS
20	1	.200	.05	.05	0.5	115	20J20	AS
20	1	.400	.1	.05	1	125	20J40	AS
20	1	.750	.15	.05	1	135	20J75	AS
20	1	1.0	.15	.05	1	150	20J100	US
20	1	1.5	.2	.05	1	175	20J150	WS
20	.5	2.0	.1	.05	1	200	20J200	WS
22	1	.100	.05	.05	0.5	105	22J10	AS
22	1	.200	.05	.05	0.5	115	22J20	AS
22	1	.400	.1	.05	1	125	22J40	AS
22	1	.750	.15	.05	1	135	22J75	AS
22	1	1.0	.15	.05	1	150	22J100	US
22	1	1.5	.2	.05	1	175	22J150	WS
22	.5	2.0	.1	.05	1	200	22J200	WS
24	1	.100	.05	.05	0.5	105	24J10	AS
24	1	.200	.05	.05	0.5	115	24J20	AS
24	1	.400	.05	.05	1	125	24J40	AS
24	1	.750	.1	.05	1	135	24J75	AS
24	1	1.0	.1	.05	1	150	24J100	US
24	1	1.5	.15	.05	1	175	24J150	WS
24	.5	2.0	.1	.05	1	200	24J200	WS
25	1	.100	.05	.05	0.5	105	25J10	AS
25	1	.200	.05	.05	0.5	115	25J20	AS
25	1	.400	.05	.05	1	125	25J40	AS
25	1	.750	.1	.05	1	135	25J75	AS
25	1	1.0	.1	.05	1	150	25J100	US
25	1	1.5	.15	.05	1	175	25J150	WS
25	.5	2.0	.1	.05	1	200	25J200	WS
28	1	.100	.05	.05	0.5	105	28J10	AS
28	1	.200	.05	.05	0.5	115	28J20	AS
28	1	.400	.05	.05	1	125	28J40	AS
28	1	.500	.05	.05	1	130	28J50	AS
28	1	.750	.1	.05	1	140	28J75	TS
28	1	1.0	.1	.05	1	155	28J100	US
28	1	1.5	.15	.05	1	180	28J150	WS
28	.5	2.0	.1	.05	1	205	28J200	WS
30	1	.050	.05	.05	0.5	105	30J05	AS
30	1	.100	.05	.05	0.5	115	30J10	AS
30	1	.200	.05	.05	0.5	120	30J20	AS
30	1	.400	.05	.05	1	125	30J40	AS
30	1	.500	.05	.05	1	135	30J50	AS
30	1	.750	.1	.05	1	145	30J75	TS
30	1	1.0	.1	.05	1	160	30J100	US
30	1	1.5	.15	.05	1	185	30J150	WS
30	.5	2.0	.1	.05	1	210	30J200	WS
32	1	.100	.05	.05	0.5	115	32J10	AS
32	1	.200	.05	.05	0.5	120	32J20	AS
32	1	.300	.05	.05	1	130	32J30	AS
32	1	.500	.05	.05	1	140	32J50	AS
32	1	.600	.1	.05	1	145	32J60	TS
32	1	1.0	.1	.05	1	160	32J100	US
32	1	1.5	.1	.05	1	185	32J150	WS
34	1	.100	.05	.05	0.5	115	34J10	AS
34	1	.200	.05	.05	0.5	120	34J20	AS
34	1	.300	.05	.05	1	130	34J30	AS
34	1	.500	.05	.05	1	140	34J50	AS
34	1	.600	.1	.05	1	145	34J60	TS
34	1	.800	.1	.05	1	155	34J80	TS
34	1	1.0	.2	.05	1	165	34J100	US
34	1	1.5	.1	.05	1	190	34J150	WS
35	1	.100	.05	.05	0.5	115	35J10	AS
35	1	.200	.05	.05	0.5	120	35J20	AS
35	1	.300	.05	.05	1	130	35J30	AS
35	1	.500	.05	.05	1	140	35J50	AS
35	1	.600	.1	.05	1	145	35J60	TS
35	1	.800	.1	.05	1	155	35J80	TS
35	1	1.0	.2	.05	1	165	35J100	US

SINGLE OUTPUT PLUG-IN (36 - 200 volt)

Nominal Output Voltage	Adjust Range ± V	Output Current Amps.	Regulation Load ± %	Regulation Line ± %	Ripple mV RMS	($) Price	Model	Case Size
36	1	.100	.05	.05	0.5	115	36J10	AS
36	1	.200	.05	.05	0.5	125	36J20	AS
36	1	.300	.05	.05	1	130	36J30	AS
36	1	.500	.05	.05	1	140	36J50	AS
36	1	.600	.1	.05	1	145	36J60	TS
36	1	.800	.1	.05	1	155	36J80	TS
36	1	1.0	.2	.05	1	165	36J100	US
36	1	1.5	.1	.05	1	190	36J150	WS
38	1	.100	.05	.05	0.5	120	38J10	AS
38	1	.200	.05	.05	0.5	130	38J20	AS
38	1	.300	.05	.05	1	135	38J30	AS
38	1	.500	.05	.05	1	145	38J50	AS
38	1	.750	.1	.05	1	155	38J75	TS
38	1	1.0	.2	.05	1	170	38J100	US
40	1	.100	.05	.05	0.5	120	40J10	AS
40	1	.200	.05	.05	1	130	40J20	AS
40	1	.300	.05	.05	1	135	40J30	AS
40	1	.400	.1	.05	1	145	40J40	AS
40	1	.600	.1	.05	1	155	40J60	TS
40	1	1.0	.2	.05	1	175	40J100	US
42	1	.100	.05	.05	0.5	120	42J10	AS
42	1	.200	.05	.05	1	130	42J20	AS
42	1	.400	.1	.05	1	140	42J40	AS
42	1	.600	.15	.05	1	160	42J60	TS
45	1	.100	.05	.05	0.5	125	45J10	AS
45	1	.200	.05	.05	1	135	45J20	AS
45	1	.300	.05	.05	1	140	45J30	AS
45	1	.400	.1	.05	1	150	45J40	AS
45	1	.600	.15	.05	1	165	45J60	TS
48	1	.100	.05	.05	0.5	125	48J10	AS
48	1	.200	.05	.05	1	135	48J20	AS
48	1	.300	.05	.05	1	145	48J30	AS
48	1	.400	.1	.05	1	155	48J40	AS
48	1	.600	.15	.05	1	175	48J60	TS
50	1	.100	.05	.05	0.5	130	50J10	AS
50	1	.200	.05	.05	1	140	50J20	AS
50	1	.300	.05	.05	1	150	50J30	AS
50	1	.400	.05	.05	1	160	50J40	AS
50	1	.500	.1	.05	1	175	50J50	TS
55	1	.050	.05	.05	1	130	55J05	AS
55	1	.100	.05	.05	1	135	55J10	AS
55	1	.200	.05	.05	1	140	55J20	AS
55	1	.300	.05	.05	1	150	55J30	AS
55	1	.400	.05	.05	1	170	55J40	TS
55	1	.500	.05	.05	1	185	55J50	TS
60	1	.050	.05	.05	1	130	60J05	AS
60	1	.100	.05	.05	1	140	60J10	AS
60	1	.200	.05	.05	1	150	60J20	AS
60	1	.300	.05	.05	1	160	60J30	AS
60	1	.400	.05	.05	1	175	60J40	TS
65	1	.050	.05	.05	1	130	65J05	AS
65	1	.100	.05	.05	1	140	65J10	AS
65	1	.300	.05	.05	1	165	65J30	AS
67	1	.050	.05	.05	1	130	67J05	AS
67	1	.100	.05	.05	1	140	67J10	AS
67	1	.300	.05	.05	1	170	67J30	AS
70	1	.050	.05	.05	1	130	70J05	AS
70	1	.100	.05	.05	1	140	70J10	AS
70	1	.200	.05	.05	1	155	70J20	AS
70	1	.300	.05	.05	1	170	70J30	AS
75	1	.050	.05	.05	1	130	75J05	AS
75	1	.100	.05	.05	1	145	75J10	AS
75	1	.200	.05	.05	1	165	75J20	AS
80	1	.050	.05	.05	1	135	80J05	AS
80	1	.100	.05	.05	1	150	80J10	AS
80	1	.200	.05	.05	1	170	80J20	AS
90	1	.050	.05	.05	1	135	90J05	AS
90	1	.100	.05	.05	1	155	90J10	AS
90	1	.200	.05	.05	1	175	90J20	AS
95	1	.020	.05	.05	1	135	95J02	AS
95	1	.050	.05	.05	1	145	95J05	AS
95	1	.100	.05	.05	1	160	95J10	AS
95	1	.200	.05	.05	1	180	95J20	AS
100	1	.020	.05	.05	1	135	100J02	AS
100	1	.050	.05	.05	1	150	100J05	AS
100	1	.100	.05	.05	1	170	100J10	AS
100	1	.200	.05	.05	1	190	100J20	AS
105	1	.050	.05	.05	1	150	105J05	AS
105	1	.100	.05	.05	1	170	105J10	AS
105	1	.200	.05	.05	1	190	105J20	AS
110	1	.050	.05	.05	1	155	110J05	AS
110	1	.100	.05	.05	1	175	110J10	AS
110	1	.200	.05	.05	1	195	110J20	AS
115	1	.050	.05	.05	1	160	115J05	AS
115	1	.100	.05	.05	1	180	115J10	AS
115	1	.200	.05	.05	1	200	115J20	AS
120	1	.050	.05	.05	1	165	120J05	AS
120	1	.100	.05	.05	1	185	120J10	AS
120	1	.200	.05	.05	1	205	120J20	AS
125	1	.050	.05	.05	1	165	125J05	AS
125	1	.100	.05	.05	1	185	125J10	AS
125	1	.200	.05	.05	1	205	125J20	AS
130	1	.020	.05	.05	1	170	130J02	AS
130	1	.100	.05	.05	1	190	130J10	AS
130	1	.200	.05	.05	1	210	130J20	AS
135	1	.100	.05	.05	1	190	135J10	AS
135	1	.200	.05	.05	1	210	135J20	AS
140	1	.100	.05	.05	1	195	140J10	AS
140	1	.200	.05	.05	1	215	140J20	AS
150	1	.050	.05	.05	1	175	150J05	AS
150	1	.100	.05	.05	1	195	150J10	AS
150	1	.200	.05	.05	1	215	150J20	AS
200	1	.050	.5	.5	5	185	200L05	AS
200	1	.100	.5	.5	5	210	200L10	AS

WIDE ADJUST OUTPUT

Power supplies similar to those included in the tables on pages 52-53, but with increased voltage adjustment ranges, can be provided. Shown below is a partial listing. Contact the factory for information on other models.

Output Voltage Range	Output Current Amps.	Regulation Load ± %	Regulation Line ± %	Ripple mV RMS	($) Price	Model	Case Size
2 to 30	.300	.5	.05	1	130	J230	AS
3 to 15	.400	.5	.05	1	130	J315	BS
4 to 10	1.5	.5	.05	1	205	J410	US
5 to 15	2.0	1.0	.5	5	240	J515	HS
5 to 25	.100	.1	.05	1	125	J525	AS
6 to 30	.200	.1	.05	1	130	J630	AS
10 to 18	.600	.3	.05	1	140	J1018	BS
10 to 40	.200	.1	.05	1	135	J1040	AS
12 to 20	.750	.15	.05	1	155	J1220	BS
14 to 18	2.0	.5	.5	5	225	J1418	WS
15 to 25	.500	.1	.05	1	150	J1525	BS
15 to 30	.300	.1	.05	1	150	J1530	BS
16 to 24	.750	.15	.05	1	155	J1624	BS
18 to 30	.400	.1	.05	1	145	J1830	BS
20 to 28	.500	.1	.05	1	150	J2028	BS
23 to 32	1.0	.15	.05	1	175	J2332	US
24 to 32	.500	.1	.05	1	130	J2432	BS
24 to 40	.400	.1	.05	1	150	J2440	BS
24 to 50	.250	.1	.05	1	130	J2450	AS
25 to 35	.300	.05	.05	1	140	J2535	BS
28 to 60	.250	.1	.05	1	175	J2860	BS
30 to 70	.300	.1	.05	1	200	J3070	BS
45 to 75	.050	.05	.05	1	150	J4575	AS

Plug-in

DUAL ISOLATED OUTPUTS
(User-selectable)

LINEAR REGULATED
AC-DC

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

Optional solder terminals.
See OPTIONS, on page 55.

Space-saving Acopian duals combine two electrically independent DC outputs in a single case. Either identical or different outputs may be selected. And every combination is supplied with Acopian's usual 3 day shipment guarantee and 5 year warranty.

Like all Acopian Plug-ins, a dual-output module can be installed in seconds. Simply plug it into a standard 11-pin socket. Acopian duals are exceptionally dependable, too - offering the highest reliability of any available series-regulated power supply.

SPECIFICATIONS

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

Output Specifications: See page 56.

Output Adjustment Range: ± 1 volt except as noted.

Polarity: Outputs are floating. Each section may be independently connected to provide any combination of positive and negative outputs.

Short Circuit Protection: Delivers current surges without damage—to protect against prolonged overloads and shorts, use of an input fuse is recommended.

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

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

MIL Tested/Increased Temperature Range: See p. 51.

Storage Temperature: –55 to +85°C.

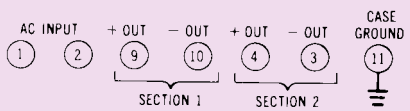
Installation: Plugs into standard 11-pin octal-type socket (see page 55). Four mounting holes (6-32) are provided in the base for fastening the module when used in other than the upright position, or if extreme vibration will be encountered.

HOW TO ORDER

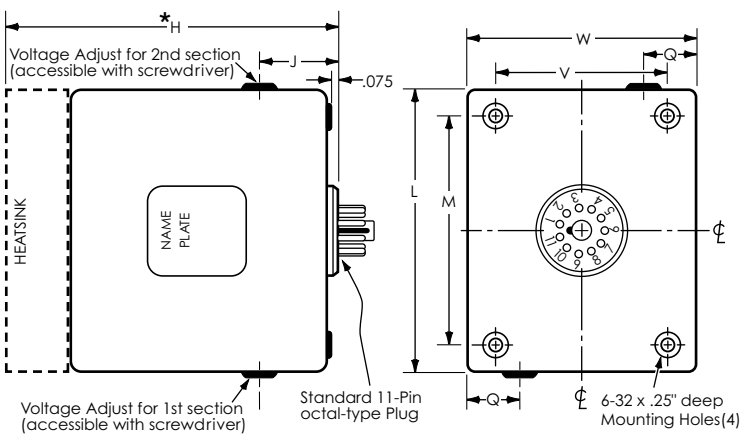
Select two **sections** from the same table on page 56. The complete model number is the combination of the two **sections** selected. Example: The combination of section 6J20D and section 12J40D is Model 6J20D-12J40D. Always assign the lower voltage section first. (Two of the same section can also be selected.) Where the indicated case sizes for the two sections differ, the larger case size applies.

For pricing purposes, add the costs of the individual sections selected. Example: The price of Model 6J20D-12J40D is $180.00 total ($85.00 plus $95.00).

PIN CONNECTIONS: Standard model.



STANDARD - Plug-in



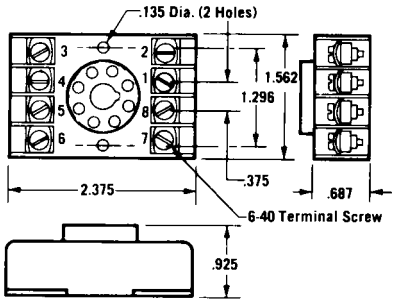
*H dimension includes HEATSINK on UDJ and WDJ case sizes.

Case Size	L	W	H*	M	V	J	Q	Approx. Weight
TDJ	4.15	3.33	4.85	2.750	2.562	1.12	.62	3 lb.
UDJ	4.15	3.33	5.53	2.750	2.562	1.12	.62	3 lb.
WDJ	5.02	3.40	5.53	3.562	2.562	1.12	.62	4 lb. 12 oz.

ACCESSORY SOCKETS

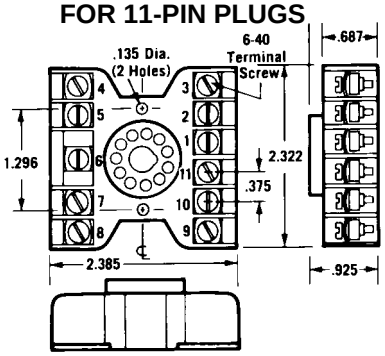
RETMA-numbered screw-type terminals simplify wiring and permit the use of wire terminals or bare wire, 12 to 20 gauge. Rated at 300 volts RMS, 10 Amp.

FOR 8-PIN PLUGS



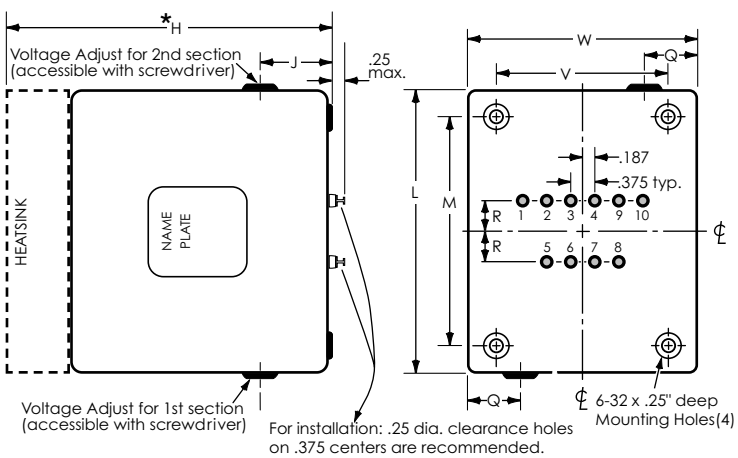
Model SL608..... $10

FOR 11-PIN PLUGS



Model SL611..... $15

OPTIONAL - Solder terminals



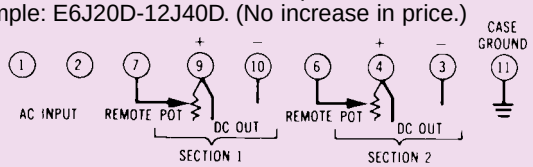
*H dimension includes HEATSINK on UDJL and WDJL case sizes.

Case Size	L	W	H*	M	V	J	Q	R	Approx. Weight
TDJL	4.15	3.33	4.77	2.750	2.562	1.04	.62	.75	3 lb.
UDJL	4.15	3.33	5.47	2.750	2.562	1.04	.62	.75	3 lb.
WDJL	5.02	3.40	5.47	3.562	2.562	1.04	.62	.25	4 lb. 12 oz.

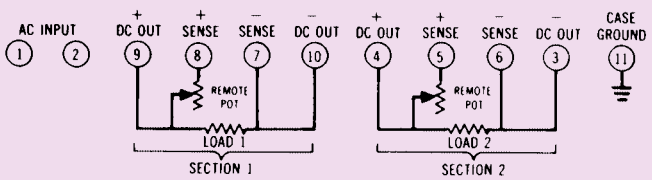
OPTIONS

Solder Terminals: All models can be furnished with solder terminals instead of the 11-pin plug. To order, add suffix "L" to model number and $30.00 to price. Example: Model 6J20D-12J40D becomes Model 6J20D-12J40DL. To determine dimensions of case with terminals, add suffix "L" to case size code indicated. (Example: TDJ becomes TDJL.)

Remote Output Adjustment: All models have local voltage adjustments. When provision for remote (external) adjustments is also desired, add prefix "E" to model number. Example: E6J20D-12J40D. (No increase in price.)



Remote Sensing: Provision for remote sensing of the output voltages, to compensate for drops in the load lines, can be furnished at an additional charge of $20.00 per unit. Add prefix "R" to model number when ordering. "R" power supplies have local voltage adjustments and provision for remote (external) output adjustments.



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

Overvoltage Protection: Two separate, preset overvoltage protection circuits, one for each output. To order, add prefix "V" to model number and add $30.00 to the standard price for outputs up to 70 volts; add $50.00 if either or both outputs are greater than 70 volts.

Plug-in DUAL ISOLATED OUTPUTS (continued)
(User-selectable)
LINEAR REGULATED

(OUTPUTS TO 400 MA)

Nominal Output Voltage	Output Current Amps.	Regulation Load ± %	Regulation Line ± %	Ripple mV RMS	(see 'How to Order') Price per Section ($)	(see 'How to Order') Section	Case Size
5	.200	.2	.05	1	80	5J20D	TDJ
5	.400	.3	.05	1	95	5J40D	TDJ
6	.200	.05	.05	1	85	6J20D	TDJ
6	.400	.15	.05	1	95	6J40D	TDJ
7	.200	.05	.05	1	85	7J20D	TDJ
7	.400	.15	.05	1	95	7J40D	TDJ
8	.200	.05	.05	1	85	8J20D	TDJ
8	.400	.1	.05	1	95	8J40D	TDJ
10	.200	.05	.05	1	85	10J20D	TDJ
10	.400	.1	.05	1	95	10J40D	TDJ
12	.200	.05	.05	1	85	12J20D	TDJ
12	.400	.1	.05	1	95	12J40D	TDJ
15	.200	.05	.05	1	85	15J20D	TDJ
15	.400	.1	.05	1	95	15J40D	TDJ
18	.200	.05	.05	1	85	18J20D	TDJ
18	.400	.1	.05	1	95	18J40D	TDJ
20	.100	.05	.05	1	75	20J10D	TDJ
20	.200	.05	.05	1	85	20J20D	TDJ
20	.400	.1	.05	1	95	20J40D	TDJ
22	.100	.05	.05	1	75	22J10D	TDJ
22	.200	.05	.05	1	85	22J20D	TDJ
22	.400	.1	.05	1	95	22J40D	TDJ
24	.100	.05	.05	1	75	24J10D	TDJ
24	.200	.05	.05	1	85	24J20D	TDJ
24	.400	.1	.05	1	95	24J40D	TDJ
26	.100	.05	.05	1	75	26J10D	TDJ
26	.200	.05	.05	1	85	26J20D	TDJ
26	.400	.05	.05	1	95	26J40D	TDJ
28	.100	.05	.05	1	75	28J10D	TDJ
28	.200	.05	.05	1	85	28J20D	TDJ
28	.400	.05	.05	1	95	28J40D	TDJ
30	.100	.05	.05	1	85	30J10D	TDJ
30	.200	.05	.05	1	90	30J20D	TDJ
30	.400	.05	.05	1	100	30J40D	TDJ
32	.100	.05	.05	1	85	32J10D	TDJ
32	.200	.05	.05	1	90	32J20D	TDJ
32	.300	.05	.05	1	100	32J30D	TDJ
34	.100	.05	.05	1	85	34J10D	TDJ
34	.200	.05	.05	1	90	34J20D	TDJ
34	.300	.05	.05	1	100	34J30D	TDJ
35	.100	.05	.05	1	85	35J10D	TDJ
35	.200	.05	.05	1	95	35J20D	TDJ
36	.100	.05	.05	1	85	36J10D	TDJ
36	.200	.05	.05	1	95	36J20D	TDJ
40	.100	.05	.05	1	85	40J10D	TDJ
40	.200	.05	.05	1	100	40J20D	TDJ
45	.100	.05	.05	1	85	45J10D	TDJ
45	.200	.05	.05	1	100	45J20D	TDJ
48	.100	.05	.05	1	90	48J10D	TDJ
48	.200	.05	.05	1	105	48J20D	TDJ
50	.050	.05	.05	1	85	50J05D	TDJ
50	.100	.05	.05	1	95	50J10D	TDJ
50	.200	.05	.05	1	110	50J20D	TDJ
55	.050	.05	.05	1	95	55J05D	TDJ
55	.100	.05	.05	1	105	55J10D	TDJ
55	.200	.05	.05	1	115	55J20D	TDJ
60	.050	.05	.05	1	95	60J05D	TDJ
60	.100	.05	.05	1	105	60J10D	TDJ
65	.050	.05	.05	1	100	65J05D	TDJ
65	.100	.05	.05	1	110	65J10D	TDJ
70	.050	.05	.05	1	100	70J05D	TDJ
70	.100	.05	.05	1	110	70J10D	TDJ
75	.050	.05	.05	1	100	75J05D	TDJ
75	.100	.05	.05	1	115	75J10D	TDJ
80	.020	.05	.05	1	95	80J02D	TDJ
80	.050	.05	.05	1	110	80J05D	TDJ
85	.020	.05	.05	1	95	85J02D	TDJ
85	.050	.05	.05	1	110	85J05D	TDJ

(OUTPUTS TO 2 AMPS.)

Nominal Output Voltage	Adjust Range ± V	Output Current Amps.	Regulation Load ± %	Regulation Line ± %	Ripple mV RMS	(see 'How to Order') Price per Section ($)	(see 'How to Order') Section	Case Size
3.3	.5	.500	.5	.05	1	100	3.3J50D	TDJ
3.3	.5	.700	.5	.05	1	105	3.3J70D	UDJ
3.3	.5	1.0	.5	.05	1	115	3.3J100D	WDJ
4	1	.500	.3	.05	1	100	4J50D	TDJ
4	.5	.700	.4	.05	1	105	4J70D	UDJ
4	.5	1.0	.5	.05	1	115	4J100D	WDJ
5	1	.500	.3	.05	1	100	5J50D	TDJ
5	.5	.700	.4	.05	1	105	5J70D	UDJ
5	.5	1.0	.5	.05	1	115	5J100D	WDJ
5	.25	2.0	.5	.05	1	140	5J200D	WDJ
6	1	.500	.15	.05	1	100	6J50D	TDJ
6	.5	.700	.2	.05	1	105	6J70D	UDJ
6	.5	1.0	.3	.05	1	115	6J100D	WDJ
7	1	.500	.15	.05	1	100	7J50D	TDJ
7	.5	.700	.2	.05	1	105	7J70D	UDJ
7	.5	1.0	.3	.05	1	115	7J100D	WDJ
8	1	.500	.1	.05	1	100	8J50D	TDJ
8	.5	.700	.15	.05	1	105	8J70D	UDJ
8	.5	1.0	.2	.05	1	115	8J100D	WDJ
9	1	.500	.1	.05	1	100	9J50D	TDJ
9	.5	.700	.15	.05	1	105	9J70D	UDJ
9	.5	1.0	.2	.05	1	115	9J100D	WDJ
10	1	.500	.1	.05	1	100	10J50D	TDJ
10	.5	.700	.15	.05	1	105	10J70D	UDJ
10	.5	1.0	.2	.05	1	115	10J100D	WDJ
12	1	.500	.1	.05	1	100	12J50D	TDJ
12	.5	.700	.1	.05	1	105	12J70D	UDJ
12	.5	1.0	.1	.05	1	120	12J100D	WDJ
13	1	.500	.1	.05	1	100	13J50D	TDJ
13	.5	.700	.1	.05	1	105	13J70D	UDJ
13	.5	1.0	.15	.05	1	120	13J100D	WDJ
15	1	.500	.1	.05	1	100	15J50D	TDJ
15	.5	.700	.1	.05	1	105	15J70D	UDJ
15	.5	1.0	.15	.05	1	120	15J100D	WDJ
18	1	.500	.1	.05	1	100	18J50D	TDJ
18	1	.750	.15	.05	1	110	18J75D	WDJ
18	.5	1.0	.15	.05	1	120	18J100D	WDJ
20	1	.500	.1	.05	1	100	20J50D	TDJ
20	1	.750	.15	.05	1	110	20J75D	WDJ

(90 TO 150 VOLTS)

Nominal Output Voltage	Adjust Range ± V	Output Current Amps.	Regulation Load ± %	Regulation Line ± %	Ripple mV RMS	(see 'How to Order') Price per Section ($)	(see 'How to Order') Section	Case Size
90	1	.050	.05	.05	1	115	90J05D	TDJ
90	1	.100	.05	.05	1	130	90J10D	TDJ
95	1	.050	.05	.05	1	120	95J05D	TDJ
95	1	.100	.05	.05	1	135	95J10D	TDJ
100	1	.050	.05	.05	1	125	100J05D	TDJ
100	1	.100	.05	.05	1	140	100J10D	TDJ
105	1	.050	.05	.05	1	125	105J05D	TDJ
105	1	.100	.05	.05	1	140	105J10D	TDJ
110	1	.050	.05	.05	1	130	110J05D	TDJ
110	1	.100	.05	.05	1	145	110J10D	TDJ
115	1	.050	.05	.05	1	135	115J05D	TDJ
115	1	.100	.05	.05	1	150	115J10D	TDJ
120	1	.050	.05	.05	1	140	120J05D	TDJ
120	1	.100	.05	.05	1	155	120J10D	TDJ
125	1	.050	.05	.05	1	140	125J05D	TDJ
125	1	.100	.05	.05	1	155	125J10D	TDJ
130	1	.050	.05	.05	1	145	130J05D	TDJ
130	1	.100	.05	.05	1	160	130J10D	TDJ
135	1	.050	.05	.05	1	145	135J05D	TDJ
135	1	.100	.05	.05	1	160	135J10D	TDJ
140	1	.050	.05	.05	1	150	140J05D	TDJ
140	1	.100	.05	.05	1	165	140J10D	TDJ
145	1	.050	.05	.05	1	150	145J05D	TDJ
145	1	.100	.05	.05	1	165	145J10D	TDJ
150	1	.050	.05	.05	1	150	150J05D	TDJ
150	1	.100	.05	.05	1	165	150J10D	TDJ

Plug-in

DUAL TRACKING OUTPUTS

LINEAR REGULATED
AC-DC

Optional solder terminals.
See OPTIONS, below.

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

Dual tracking output Plug-in power supplies provide the balanced voltages commonly required for driving operational amplifiers and related linear circuitry. The convenient plug-in configuration simplifies mounting and wiring, and connections for the remote sensing of the output voltages, to permit compensation of load line voltage drops, are a standard feature.

SPECIFICATIONS

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

Output Tracking: Within 1%.

Polarity: Positive output, common, and negative output.

Remote Voltage Sensing: Provision for sensing the output voltage across the load, so that drops in the load lines are compensated, is a standard feature.

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

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

Storage Temperature: –55 to +85°C.

Installation: Plugs into standard 8-pin octal socket (see page 55). Four mounting holes (6-32) are provided in the base for fastening the module when used in other than the upright position, or if extreme vibration will be encountered.

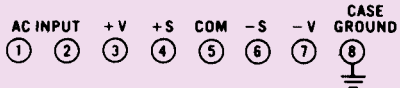
OPTIONS

Solder Terminals: All models can be furnished with solder terminals instead of the octal-type plug. To order, add suffix "L" to model number and $30.00 to price.

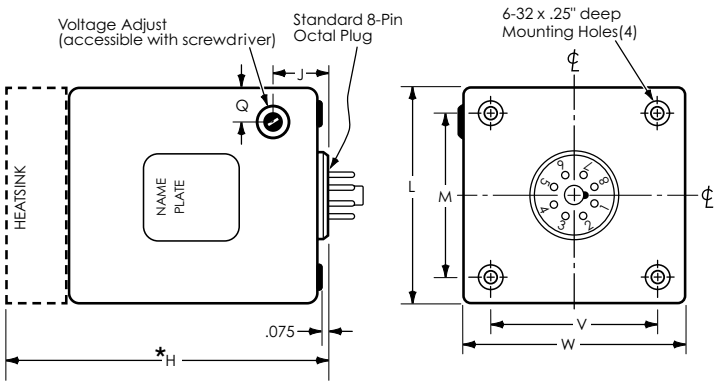
230 Volt Input: All models can be alternately furnished for operation on inputs of 210-250 VAC, 50-400 Hz. Add suffix "–230" to model number and $25.00 to price. The "–230" option requires two additional days.

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.

PIN CONNECTIONS:



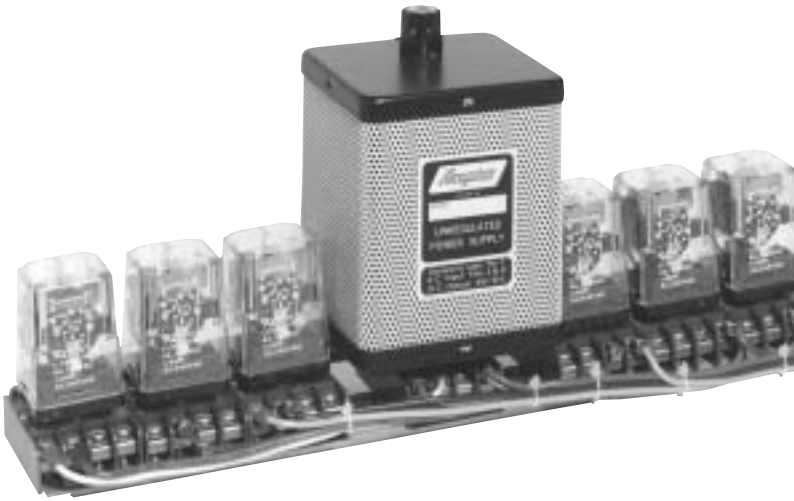
Nominal Output Voltages	Adjust Range ± V	Amps. per Output	Regulation Load ± %	Regulation Line ± %	Ripple mV RMS	($) Price	Model	Case Size
±5	.25	.750	.1	.1	1.5	200	JD5-75	BD
±5	.25	1.5	.1	.1	1.5	225	JD5-150	DU
±12	1	.400	.1	.1	1.5	175	JD12-40	DA
±12	1	.700	.1	.1	1.5	200	JD12-70	BD
±12	1	1.0	.1	.1	1.5	225	JD12-100	DU
±15	1	.400	.1	.1	1.5	175	JD15-40	DA
±15	1	.700	.1	.1	1.5	200	JD15-70	BD
±15	1	1.0	.1	.1	1.5	225	JD15-100	DU



*H dimension includes HEATSINK on BD and DU case sizes.

Case Size	L	W	H*	M	V	J	Q	Approx. Weight
DA	3.40	3.28	4.67	2.625	2.625	1.00	.66	2 lb. 8 oz.
BD	3.40	3.28	5.33	2.625	2.625	1.00	.66	2 lb. 14 oz.
DU	3.33	4.15	5.53	2.562	2.750	1.12	.62	3 lb. 8 oz.

Plug-in
UNREGULATED
AC-DC
single output & wide adjust output



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

To meet the need for unregulated DC power at low cost, Acopian offers a broad line of both fixed and fully adjustable Plug-in power modules with output voltages to 950 volts.

There is no need to use tiedown hardware unless it is mounted in other than an upright position, or where shock and vibration will be encountered.

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 fixed output models, and the maximum rated output voltages for models with adjustable 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%.

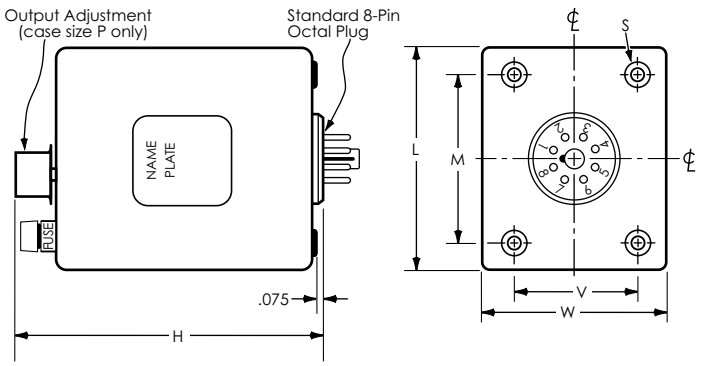
Line Regulation: Output voltage change due to line change directly proportional to input change.

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

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

Storage Temperature: –55 to +85°C.

Installation: Plugs into standard 8-pin octal socket (see page 55). Four 6-32 mounting holes (on case sizes G and K) or four 10-32 mounting studs (on case sizes Q and P) are provided in the base for fastening the module when used in other than the upright position, or if extreme vibration will be encountered.

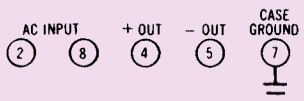


Case Size	L	W	H	M	V	S	Approx. Weight
G	3.40	3.28	5.12	2.625	2.625	Four 6-32 x .25" deep mounting holes	2 lb. 8 oz.
K	4.15	3.33	5.21	2.750	2.562	Four 6-32 x .25" deep mounting holes	4 lb. 4 oz.
Q	4.15	3.33	7.12	2.750	2.562	Four 10-32 x 9/16" long mounting studs	7 lb.
P	4.15	3.33	7.25	2.750	2.562	Four 10-32 x 9/16" long mounting studs	5 lb.

OPTIONS

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

PIN CONNECTIONS:



SINGLE OUTPUT

Nominal Output Voltage	Output Current Amps.	Ripple Volts RMS	($) Price	Model	Case Size
7	1.0	.8	90	7U100	G
13	.600	.5	90	13U60	G
13	3.0	1.5	120	13U300	K
14	1.0	.7	90	14U100	G
16	1.0	.7	90	16U100	G
18	1.0	.7	90	18U100	G
20	3.0	2.3	120	20UP300	K
24	1.0	1.7	90	24U100	G
24	3.0	2.2	120	24UP300	K
28	1.0	1.7	90	28U100	G
28	3.0	2.7	120	28UP300	K
30	1.0	1.6	95	30UP100	G
32	.400	.6	90	32U40	G
40	1.0	1.6	95	40UP100	G
41	.400	.6	90	41U40	G
45	1.0	1.6	100	45UP100	G
48	.400	.6	95	48U40	G
50	1.0	1.6	100	50UP100	G
52	.400	.6	95	52U40	G
55	.250	.4	95	55U25	G
65	.250	.4	95	65U25	G
80	.300	1	100	80UP30	G
90	.300	2.2	105	90UP30	G
100	.200	1	105	100UP20	G
110	.200	1	105	110UP20	G
120	.200	1	105	120UP20	G
140	.200	2	105	140UP20	G
150	.200	2	105	150UP20	G
165	.200	2	105	165UP20	G
170	.200	2	110	170UP20	G
180	.200	2	110	180UP20	G
200	.200	2	110	200UP20	G
250	.200	4	110	250UP20	G
275	.100	3	105	275UP10	G
340	.100	3	105	340UP10	G
360	.100	3	105	360UP10	G
370	.100	3	105	370UP10	G
420	.100	6.7	105	420UP10	G
475	.020	3.1	100	475U02	G
580*	.020	3.1	100	580U02	G
750*	.020	3.1	105	750U02	G
900*	.020	5	110	900U02	G

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

SINGLE OUTPUT - for relays

Nominal Output Voltage	Output Current Amps.	Output Voltage N/L-F/L	Ripple Volts RMS	($) Price	Model	Case Size
6	2.0	7.7 to 4.8	2.0	90	US6	G
6	5.0	7.6 to 5.0	2.5	120	UP6	K
12	1.5	14.9 to 10.9	2.5	90	US12	G
12	5.0	14.8 to 10.0	2.5	120	UP12	K
24	1.5	26.2 to 20.2	2.5	90	US24	G
24	3.5	26.0 to 21.0	2.0	120	UP24	K
24	5.0	26.6 to 20.0	3.2	125	U24	Q
28	1.0	30.6 to 25.5	2.0	95	US28	G
28	3.0	30.8 to 26.0	2.0	120	UP28	K
28	5.0	31.9 to 23.6	3.4	125	U28	Q
48	0.5	54.0 to 42.0	1.3	95	US48	G

WIDE ADJUST OUTPUT

Output Voltage Range	Output Current Amps.	Ripple Volts RMS	($) Price	Model	Case Size
0-14	1.0	1	215	14UA100	P
0-54	1.0	1.6	215	54UA100	P
0-95	.300	2.2	215	95UA30	P
0-125	.200	1.5	215	125UA20	P
0-220	.200	2	215	220UA20	P
0-260	.200	4	215	260UA20	P
0-370	.100	3	215	370UA10	P
0-450	.100	6.7	215	450UA10	P
0-500	.020	3.1	215	500UA02	P
0-800*	.020	3.1	215	800UA02	P
0-950*	.020	5	215	950UA02	P

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

(See page 35 for other unregulated wide adjust output power supplies.)

Plug-in

HIGH ISOLATION

LINEAR REGULATED
AC-DC
single output

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

For applications where high isolation in a regulated power supply is required, such as in powering strain gage and other transducer bridge circuits, Acopian offers 20 different models with ratings from 5 to 36 volts and 0.050 to 0.200 amperes. All models feature input-output isolation of 10,000 megohms minimum to ground.

To install, simply plug into a standard octal socket. There is no need to use tiedown hardware unless the module is mounted in other than an upright position, or where shock and vibration will be encountered.

SPECIFICATIONS

Isolation: 10,000 megohms to ground (min) in parallel with 100 pF (typical).

Leakage Current: 10 µA (typical).

Input-Output Coupling: 50 pF (typical).

Input Voltage: 105-125 VAC, 50-60 Hz, single phase.

Load Regulation: ±0.05%

Line Regulation: ±0.05%

Polarity: Output floating; either positive or negative terminal may be grounded.

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

Ambient Operating Temperature: –20 to +71°C. No derating required.

Storage Temperature: –55 to +85°C.

Installation: Plugs into standard 8-pin octal socket (see page 55). Four mounting holes (6-32) are provided in the base for fastening the module when used in other than the upright position, or if extreme vibration will be encountered.

Case size: AS, (See page 50 for drawing).

Weight: 1 lb. 8 oz.

OPTIONS

Remote Output Adjustment: All standard models are provided with local voltage adjustment. For remote (external) adjustment, add prefix "E" to model number. Example: Model 15X20 will be E15X20. No increase in price.

Solder Terminals: All Acopian Plug-in power supplies are also available with solder terminals in place of an octal-type plug. To order, add suffix "L" to model number and $30.00 to price. Example: Model 12X20 becomes Model 12X20L.

Nominal Output Voltage	Adjust Range ± V	Output Current Amps.	Ripple µV RMS	($) Price	Model
5	1	.200	350	170	5X20
6	1	.200	350	170	6X20
7	1	.200	350	170	7X20
8	1	.200	350	170	8X20
9	1	.200	350	170	9X20
10	1	.200	350	170	10X20
12	1	.200	350	170	12X20
15	1	.200	350	170	15X20
16	1	.200	350	170	16X20
18	1	.200	350	170	18X20
20	1	.200	350	170	20X20
22	1	.200	350	170	22X20
24	1	.200	350	170	24X20
25	2	.150	350	170	25X15
28	2	.150	350	170	28X15
30	2	.100	250	170	30X10
32	2	.100	250	170	32X10
34	2	.100	250	170	34X10
35	1	.050	200	170	35X05
36	1	.050	200	170	36X05

Overvoltage Protection: An internal preset overvoltage protector is available. To order, add prefix "V" to the model number, and increase standard price by $25.00.

ORDERING INFORMATION

WARRANTY: Acopian power supplies are warranted to be free from defects in material and workmanship for a period of five years (encapsulated devices and fans, for one year) from date of original shipment. Acopian's obligation under this warranty is limited to repairing any power supply returned to the factory Service Department in Easton, PA and replacing any defective parts. Authorization must be obtained from Acopian before a power supply may be returned for repair. Units must be well packed when shipping to Acopian; the repair of any damage incurred during shipment will be charged. Transportation charges are to be paid by the purchaser. A reinspection and handling charge will be applied to returned units found to have no defects. If a failure has been caused by misuse, operation in excess of specifications, or modification by the customer, repairs will be billed at cost; in such cases, a cost estimate will be submitted before work is started.

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

This warranty is in lieu of all other warranties, obligations, and liabilities, expressed or implied, and is the purchaser's exclusive remedy. Acopian makes no warranty, either express or implied, of merchantability, fitness for a particular purpose or otherwise. In no event shall Acopian be liable for incidental or consequential damages of any kind, including loss of business or profits, or any other losses incurred by the purchaser or any third party.

The validity, performance and construction of all terms and conditions in this catalog and any sale made by Acopian shall be determined by the law of Pennsylvania, not including its law of conflict of laws.

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

EXPORT ORDERS: A minimum export handling charge of $50.00 applies. (For Canadian orders, charge is $25.00, and applies only when Canadian customs forms are required.)

TERMS: Net 30 days, subject to credit approval.

DISCOUNTS: Discounts are available to quantity buyers.

SHIPPING: Location permitting, small shipments are made by United Parcel Service, or by Parcel Post; larger shipments, by insured motor freight collect. Shipments can be made by air upon request. If equipment is received in damaged condition, it is the customer's responsibility to contact the carrier and file a claim for damages.

REPAIR SERVICE: See Warranty. Miniaturized power supplies are not repairable.

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

Special components, such as transformers, are stocked at the factory warehouse. Write or telephone for information on the parts required, referencing the model number of the power supply, the circuit designation of the component, and a description.

MOISTURE/FUNGUS PROOFING: Power supplies can be furnished with a moisture and fungus resistant varnish applied to interior surfaces. To order, add the suffix letter F to the model number. The additional cost is $15.00 per output and requires two additional days. Not available on High Voltage, Switching, Miniaturized and Rack Mounting models.

TAGGING: Maximum of 15 characters/spaces. Add $5.00 to price.

TEST DATA: Cost, $25.00 or 2% of order, whichever is greater.

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

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

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*At **www.acopian.com** you will find:*

- *This complete catalog in an easy-to-use format.*

plus...

- *Single Output power supply "Quick Find" by DC output voltage.*
- *CAD drawings.*
- *Instruction sheets.*

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

Acopian
Since 1957

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

ACOPIAN PROMISES TO SHIP WITHIN THREE DAYS

. . . and we keep that promise. For more than 35 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:

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. Switching, High Voltage, Redundant and Rack Mounting power supplies and Systems are shipped within 9 days.

Has Acopian ever failed to meet this promise?

Never.

Do options affect shipping time?

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

Is the 3-day promise affected by quantity? Suppose we need 50 or 100 pieces?

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

What if I need four or five different models? Does the 3-day promise still apply?

Yes. Guaranteed 3-day shipment applies to one model or to a combination of models.

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

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

It takes me so long to get a requisition processed and approved that your 3-day shipment may not help me much. Do you have a solution to this problem?

Verbal orders are acceptable. We suggest you ask your purchasing people to call in the order. All we require is the purchase order number and shipping information.

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

Transportation time varies with the carrier used. Unless otherwise specified, Acopian ships small orders by UPS Surface, which is usually delivered in one or two days locally and in about a week coast-to-coast. Many carriers guarantee next-day delivery, at additional cost. Your Purchasing Department may prefer that a certain carrier be used.

You say Acopian has never failed to meet the 3-day promise. How do you do it?

Our facilities have been designed and equipped to meet our 3-day shipment promise. When your order is received, your power supplies are built specifically for you and shipped within three days. We do not ship from stock. (For this reason we are unable to accept returns for credit.)

I've seen other power supply manufacturers advertise "stock delivery". Why should I consider 3-day shipment a significant benefit?

Because a "delivery-from-stock" promise is not precise, and may be misleading. What if the power module you require is out of stock when your order reaches a typical vendor? A four to six week delay is not unusual before inventory is replenished and your order is shipped. Consider how this possibility is compounded when you need four or five different modules. In other words, fulfillment of a "ship-from-stock" promise is dependent on a variable - the quantity in stock when your order is placed. Acopian's 3-day shipment promise is unconditional.

If you have other questions, please call or write to Vice-President, Marketing. You will receive a prompt and straightforward reply.

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