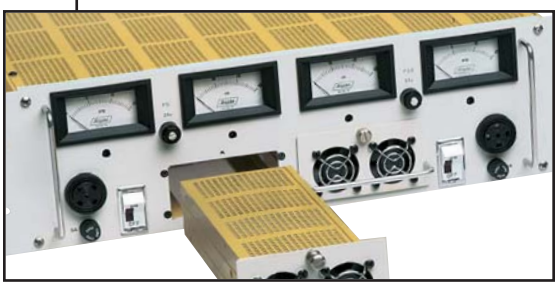
Acopian

Bulletproof Power

RACK MOUNTING **POWER SUPPLIES**

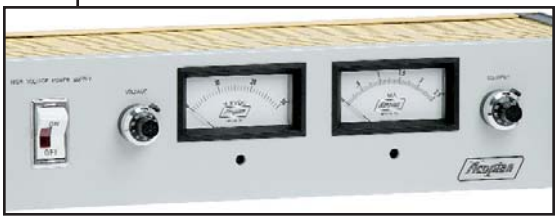
Multiple Output Systems

Redundant Output Systems



Programmable

High Voltage (to 30KV)



ANY VOLTAGE YOU NEED:
'SLOT' OUTPUTS TO 125 VDC; WIDE ADJUST, TO 0-30KV

- Shipped within 9 DAYS
- Five year warranty
- Made in U.S.A.

Acopian Technical Company
P.O.Box 638
Easton, PA 18044
Return Service Requested

PRSRT STD
U.S. POSTAGE
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Acopian Technical Company ■ P.O. Box 638, Easton, PA 18044
Phone: 610-258-5441 ■ Toll-free: 800-523-9478 ■ Fax: 610-258-2842

Mini Power Supplies mounted in NEMA 4X Enclosures

Acopian can mount any of its screw terminal Mini Power Supplies in a NEMA 4X enclosure (go to www.acopian.com).

NEMA 4X enclosures provide protection against accidental contact with dangerous voltages, and protect the power supply inside from the ingress of dirt, dust, lint, and other substances. Although they do not have an airtight seal, they provide substantial protection from dripping and splashing water and other liquids.

Call 800-523-9478 for ordering information or go to www.acopian.com

Acopian Technical Company
Easton, PA

1-800-523-9478 • www.acopian.com

Acopian

Need Ultra-Reliability?

Redundant Power Packages and Systems have two power supplies for each output. If one fails, you're still operating.

Wall Mounting
Redundant Power Package

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

Rack Mounting
Redundant Power Package

Pluggable
Redundant
Power Package

Customized Redundant Systems
(Built to your requirements)

Use Redundant Power

If none of our standard models meets your requirements, we'll build you one that does.

See pages 6- 14

284 standard models, each shipped within 9 Days

Our standard models have outputs from 5 to 125 volts, and up to 1200 watts. Each is fully wired, tested and shipped within 9 days after receiving your order. All that's left for you to do is to connect it to input power and your load.

We can customize Redundants for you

If no standard model meets your needs, we can customize a model for you, or design a 'special' for your unique requirements. We frequently design 'specials' with outputs as high as 3600 watts.

Various configurations to fit the available space

Acopian manufactures redundants in three form factors: rack mounting (some with power supplies that plug in from the front), wall mounting and modular. If you need something different, speak with one of our engineers. We can design a form that meets your requirements.

Proven designs since 1973

There are numerous considerations that go into the design of a good redundant system. (Can the power supplies compensate the voltage drops of the isolation diodes? Is the regulation maintained after the diodes? Is the output stable?) Acopian has been manufacturing a standard line of redundants since 1973. We have the expertise to build redundants that are extremely reliable, provide high performance and are easy to use.

Five Year Warranty

Obviously, the reliability of a redundant system is dependent upon the reliability of the power supplies it uses. We build our supplies so you can operate them reliably for many years, which is why all Acopian Redundants come with an unsurpassed, full 5 year warranty. Our customers have told us about Acopian supplies that have remained in use for 30 years and more.

REDUNDANT POWER

Choose the configuration that's best for your application

■ Shipped Within 9 Days ■ U.L. Recognized (pages 8,9,14) ■ Five Year Warranty

GENERAL INFORMATION

Applications: Redundant Power 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.

Output Redundancy: Each Redundant Power Package or Modular Redundant System 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 or Modular Redundant Systems 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 AC input power may be used, to obtain the additional benefit of input power redundancy. By feeding one input through a battery-backup power source (UPS), DC output power will be maintained even if both AC power sources should fail.

Serviceability: A defective power supply can be rapidly and safely changed while the other supply 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 or Modular Systems. 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.

Operation: 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: Acopian Redundants contain two voltage monitoring circuits with relays, the 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 from the nominal rating (3.0 volts for Linear models with outputs over 49 volts; 4.0 volts for Switching models with outputs over 49 volts).

Overvoltage Protection: Automatic recovery. 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.

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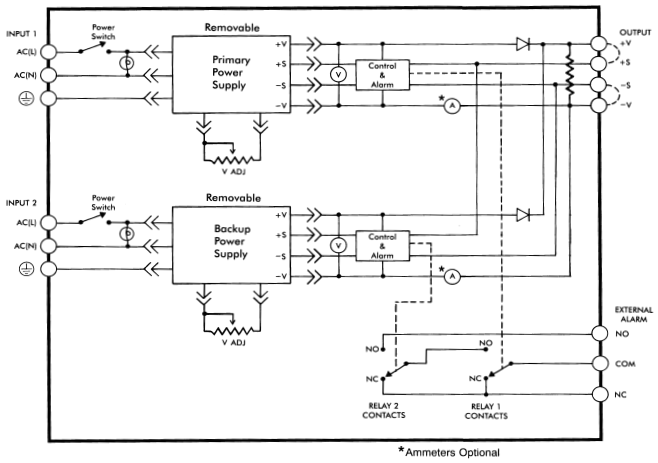
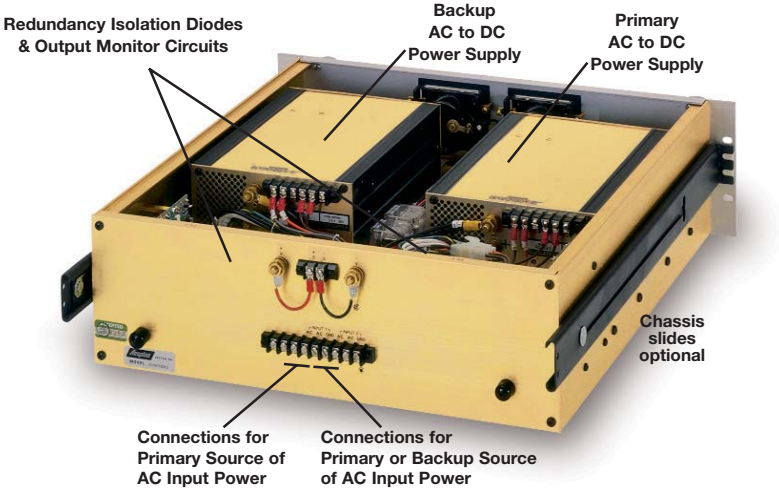
Simplified Diagram for Redundant Power Packages





SPECIFICATIONS

(for all Redundant Power Packages & Modular Redundant Systems)

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 (all models): 105-125 VAC, 50-400 Hz, single phase.
Switching (Redundant Power Packages): 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%.
Switching (Pluggable Redundant Power Packages): 90-265 VAC, 49-61 Hz, single phase.
Switching (Modular Redundant Systems): 90-265 VAC, 49-61 Hz, single phase.

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.

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 (Switching Modular Redundant Systems and Pluggable Redundant Power Packages have 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 Monitoring:
Redundant Power Packages: A separate voltmeter for each output (standard). Ammeters available; see Options.
Modular Redundant Systems: 'Output Present' LED for each power supply is located on the Integration Module. ('Output Present' green LEDs are also located on each power supply (DC on) on the Switching Regulated Modular Redundant Systems.)

Alarm Relay Contact Ratings: 120 VAC, 8A / 60 Vdc, 1A. (To comply with SELV requirements, limit switched voltage to 60 Vdc/42 VAC.)

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.

Terminal Strip Cover: Clips on.

LINEAR REGULATED **REDUNDANT POWER PACKAGES**
Rack Mounting & Wall Mounting

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

AC-DC
single output

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 and handles optional)

For Specifications and other information, see pages 6 & 7.

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.

Separate Alarm Contacts for each Power Supply: If a power supply's output is incorrect, using two alarms permits remotely identifying that power supply. Each contact set is Form C (SPDT). To order, add suffix "R" to model number and $35.00 to price.(Cannot combine "K" and "R" options on Wall Mounting units.)

Handles (for Rack Mounting models)**:** Add suffix "H" to model number and $30.00 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. The "–230" option 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

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SWITCHING REGULATED **REDUNDANT POWER PACKAGES**
Rack Mounting & Wall Mounting

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

AC-DC
single output

Wall Mounting

(Ammeters optional)

For Specifications and other information, see pages 6 & 7.

OPTIONS

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

Ammeters: One for each output. 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.

Separate Alarm Contacts for each Power Supply: If a power supply's output is incorrect, using two alarms permits remotely identifying that power supply. Each contact set is Form C (SPDT). To order, add suffix "R" to model number and $35.00 to price. (Cannot combine "K" and "R" options on Wall Mounting units.)

Handles (for Rack Mounting models)**:** Add suffix "H" to model number and $30.00 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. The "–230" option requires two additional days.

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

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.)
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.)
7R18	7" x 19" panel, 18½" deep (50 lb.)
7R20	7" x 19" panel, 20½" deep (64 lb.)

Wall Mounting: (rough dimensions in inches)

317R18	4.3D x 17W x 18.5H (18 lb.)
517R18	6D x 17W x 18.5H (22-26 lb.)
517R20	6D x 17W x 20.5H (34 lb.)
519RW15	6.1D x 19W x 15.5H (24 lb.)
519RW18	6.1D x 19W x 18.5H (27 lb.)
522RW17	6.1D x 22.5W x 17.3H (33 lb.)
719R20	7.8D x 19W x 20.5H (58 lb.)
719R25	7.8D x 19W x 25.5H (70 lb.)

(For exact dimensions see the complete catalog or www.acopian.com)

AC-DC *single output*

For Specifications and other information, see pages 6 & 7.

These systems have the versatility to be mounted in a wide variety of ways – within a system cabinet, on a DIN rail or to a wall. Another benefit is that the three modules need not be mounted together, so that if a control panel is crowded, just the Integration Module may be mounted there and the power supplies mounted elsewhere.

System Description: Each Modular Redundant DC Power System consists of three units: two identical power supplies connected to an Integration Module by 24" long cables. The Integration Module includes the diodes for isolating the power supply outputs, AC input switches, input fuses, LED 'output present' indicators, failure alarm circuits, and the umbilical cables which plug into the power supplies. Connections for the AC inputs, redundant DC output and failure alarm relays are on a screw terminal strip.

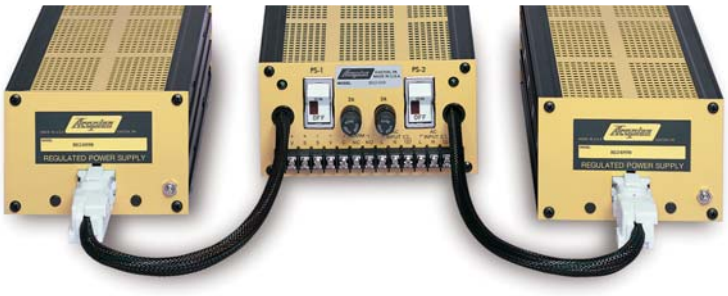
Mounting: Each module has threaded mounting holes which permit mounting to a chassis, cabinet wall or bracket, or they may be used on a test bench or tabletop. To mount from the power supply side of the mounting surface or for DIN rail mounting, use an Accessory Mounting Kit (see page 29).

Interconnection: The Integration Module has two 24-inch-long cables.

OPTIONS

Cable Lengths: Although 24" is standard, any other length from 12" to 60" may be ordered as an option. To order, add suffix "C??" to model number and $60.00 to price. Replace the "??" with the cable length desired. For example, if you are ordering Model RM24M9 with 4-foot (48") cables, the model number would be RM24M9C48, and the price would be $995.00 + $60.00 = $1,055.00.

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 $80.00 to price. The "–230" option requires two additional days.



LINEAR REGULATED **MODULAR REDUNDANT SYSTEMS**

Nominal Output Voltage	Adjust Range ±V	Output Current Amps. at 40°C	55°C	71°C	Ripple mV RMS	($) Price	Model	Case sizes: Integration Module	Case sizes: Power Supplies (2)
5	.5	2.6	2.5	2.4	1	895	RM5N8X	RM6	CN8H
5	.5	5.3	4.4	3.5	1	995	RM5M6	RM6	CM6
5	.5	11	9.3	7.5	1	1095	RM5M13	RM6	CM13
5	.5	21	17	14	1	1295	RM5H11	RM6	CH11
12	.5	1.5	1.5	1.5	1	895	RM12N8X	RM6	CN8H
12	.5	3.5	3	2.5	1	995	RM12M6	RM6	CM6
12	.5	8	7.5	7	1	1095	RM12M13	RM6	CM13
12	.5	16	13.8	11.2	1	1295	RM12H11	RM6	CH11
12	.5	20	17	14.2	1	1495	RM12H16	RM6	CH16
15	.5	1.5	1.5	1.5	1	895	RM15N8X	RM6	CN8H
15	.5	4	3.8	3.6	1	995	RM15M9	RM6	CM9
15	.5	6.5	6	5.5	1	1095	RM15M13	RM6	CM13
15	.5	14.7	12.5	10.3	1	1295	RM15H11	RM6	CH11
15	.5	18.7	16	13.3	1	1495	RM15H16	RM6	CH16
24	.5	.9	.9	.9	1	895	RM24N8X	RM6	CN8H
24	.5	3	2.7	2.4	1	995	RM24M9	RM6	CM9
24	.5	5	5	5	1	1095	RM24M13	RM6	CM13
24	.5	11.7	10.2	8.7	1	1295	RM24H11	RM6	CH11
24	.5	14.7	12.7	10.7	1	1495	RM24H16	RM6	CH16
28	.5	1	1	1	1	895	RM28N8X	RM6	CN8H
28	.5	2.7	2.6	2.5	1	995	RM28M9	RM6	CM9
28	.5	5	5	5	1	1095	RM28M13	RM6	CM13
28	.5	10.5	9.2	8	1	1295	RM28H11	RM6	CH11
28	.5	14	12	10	1	1495	RM28H16	RM6	CH16
48	.5	.4	.4	.4	1	930	RM48N8T	RM6	CN8T
48	.5	1.6	1.4	1.2	1	1040	RM48M9	RM6	CM9
48	.5	3	3	3	1	1140	RM48M13	RM6	CM13
48	.5	6	5	4	1	1345	RM48H11	RM6	CH11
48	.5	8.5	7.2	5.5	1	1635	RM48H16	RM6	CH16
60	1	.25	.25	.25	1	960	RM60N8T	RM6	CN8T
60	1	1	.9	.8	1	1070	RM60M9	RM6	CM9
60	1	2.5	2.1	1.7	1	1170	RM60M13	RM6	CM13
60	1	5	4.1	3.3	1	1375	RM60H11	RM6	CH11
60	1	7	5.8	4.6	1	1645	RM60H16	RM6	CH16
120	1	.12	.12	.12	1	980	RM120N8T	RM6	CN8T
120	1	.5	.5	.4	1	1095	RM120M6	RM6	CM6
120	1	1.2	1.1	1	1	1200	RM120M13	RM6	CM13
120	1	2.5	2	1.6	1	1415	RM120H11	RM6	CH11
120	1	3.5	2.9	2.3	1	1690	RM120H16	RM6	CH16
125	1	.12	.12	.12	1	1000	RM125N8T	RM6	CN8T
125	1	.4	.4	.4	1	1115	RM125M6	RM6	CM6
125	1	1.2	1.1	1	1	1220	RM125M13	RM6	CM13
125	1	2.4	1.9	1.5	1	1435	RM125H11	RM6	CH11
125	1	3.4	2.8	2.3	1	1710	RM125H16	RM6	CH16

CASE SIZES:

RM6 6.34W x 3.44H x 7.12L (2 lb. 8 oz.)
CM6 5.12W x 3.44H x 6.59L (4 lb. 4 oz.)
CM9 5.12W x 3.44H x 9.25L (7 lb. 4 oz.)
CM13 5.12W x 3.44H x 13.25L (11 lb.)
CH11 7.37W x 5.12H x 11.25L (18 lb. 4 oz.)
CH16 7.37W x 5.12H x 16.00L (26 lb.)
CN8H 4.68W x 1.68H x 8.47L (3 lb. 14 oz.)
CN8T 3.84W x 1.68H x 8.47L (3 lb. 2 oz.)

(For exact dimensions see the complete catalog or www.acopian.com)

Acopian Technical Company ■ P.O. Box 638, Easton, PA 18044
Phone: 610-258-5441 ■ Toll-free: 800-523-9478 ■ Fax: 610-258-2842

AC-DC *single output*

With Universal Input and Power Factor Correction

ACCESSORY MOUNTING KITS for Modular Redundant Systems

FOR WALL MOUNTING $8
These kits provide a way of mounting power supplies on a wall or panel when the other side of the mounting surface is inaccessible. Each kit consists of four aluminum brackets and four machine screws for fastening them to the power supply, effectively adding mounting flanges to the power supply.

FOR DIN RAIL MOUNTING $15
Rear Mounting, Horizontal Mounting or Vertical Mounting

For more Specifications and information, see pages 6 & 7.

SPECIFICATIONS

Input Voltage: 90-265 VAC, 49-61 Hz, single phase. (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.)

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

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

Output Monitoring: 'Output Present' green LEDs are located on each power supply (DC on) and on the Integration Module.

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

Startup Time: 800 mS typical.

Remote Sensing: Compensates up to 0.5 volt drop per output line (1 volt for 55 to 125 volt models), within the limits of the output voltage adjustment range.

Holdup Time: 16 mS minimum.

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

Switching Frequency: 100 kHz (Typical).

Isolation: Input to output, input to case; 500 VAC. Output to case; 300 VAC.

Thermal Protection: Thermostat, self-resetting.

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

CASE SIZES:

RW6	6.34W x 3.44H x 7.12L (3 lb. 4 oz.)
WN8A	3.45W x 1.68H x 9.38L (1 lb. 14 oz.) (1 fan on rear panel)
WN8	3.45W x 1.68H x 9.38L (2 lb. 2 oz.) (2 fans on rear panel)

(For exact dimensions see the complete catalog or www.acopian.com)

SWITCHING REGULATED **MODULAR REDUNDANT SYSTEMS**

Nominal Output Voltage	Adjust Range ±V	Output Current Amps. at 40°C	55°C	71°C	Ripple mV (@ 25 MHz BW) RMS	P-P	($) Price	Model	Case sizes: Integration Module	Power Supplies (2)
3.3	.5	15.4	13	10.7	10	50	1100	RM3.3WN8A	RW6	WN8A
3.3	.5	24	20.5	16.8	10	50	1250	RM3.3WN8	RW6	WN8
5	.5	15.4	13	10.7	10	50	1100	RM5WN8A	RW6	WN8A
5	.5	24	20.5	16.8	10	50	1250	RM5WN8	RW6	WN8
8	.5	14.4	12	10	15	100	1100	RM8WN8A	RW6	WN8A
8	.5	23	19.5	16.1	15	100	1250	RM8WN8	RW6	WN8
10	.5	13.5	11.5	9.5	15	100	1100	RM10WN8A	RW6	WN8A
10	.5	21	18.5	15	15	100	1250	RM10WN8	RW6	WN8
12	.5	12.3	10.5	8.6	15	100	1100	RM12WN8A	RW6	WN8A
12	.5	20	17	14	15	100	1250	RM12WN8	RW6	WN8
13	.5	11.3	9.7	7.9	15	100	1100	RM13WN8A	RW6	WN8A
13	.5	18.4	15.7	12.9	15	100	1250	RM13WN8	RW6	WN8
15	.5	10.2	8.7	7.1	15	100	1100	RM15WN8A	RW6	WN8A
15	.5	16.5	14	11.5	15	100	1250	RM15WN8	RW6	WN8
20	.5	7.6	6.5	5.3	15	100	1100	RM20WN8A	RW6	WN8A
20	.5	12.7	10.7	8.8	15	100	1250	RM20WN8	RW6	WN8
24	.5	7.2	6.1	5	15	100	1100	RM24WN8A	RW6	WN8A
24	.5	11.5	9.8	8	15	100	1250	RM24WN8	RW6	WN8
28	.5	5.9	5	4.1	15	100	1100	RM28WN8A	RW6	WN8A
28	.5	9.5	8.1	6.7	15	100	1250	RM28WN8	RW6	WN8
32	.5	5.2	4.5	3.7	25	150	1100	RM32WN8A	RW6	WN8A
32	.5	8.3	7	5.8	25	150	1250	RM32WN8	RW6	WN8
40	.5	4.2	3.6	3	25	150	1100	RM40WN8A	RW6	WN8A
40	.5	6.8	5.8	4.8	25	150	1250	RM40WN8	RW6	WN8
48	.5	3.5	3	2.5	25	150	1100	RM48WN8A	RW6	WN8A
48	.5	5.7	4.9	4	25	150	1250	RM48WN8	RW6	WN8
55	1	3	2.5	2.1	50	150	1100	RM55WN8A	RW6	WN8A
55	1	4.5	3.8	3.1	50	150	1250	RM55WN8	RW6	WN8
60	1	2.8	2.3	1.9	50	150	1100	RM60WN8A	RW6	WN8A
60	1	4.2	3.5	2.9	50	150	1250	RM60WN8	RW6	WN8
70	1	2.4	2	1.7	67	200	1100	RM70WN8A	RW6	WN8A
70	1	3.6	3.1	2.5	67	200	1250	RM70WN8	RW6	WN8
80	1	2.1	1.7	1.4	67	200	1100	RM80WN8A	RW6	WN8A
80	1	3.1	2.6	2.2	67	200	1250	RM80WN8	RW6	WN8
90	1	1.8	1.5	1.3	100	300	1100	RM90WN8A	RW6	WN8A
90	1	2.8	2.4	2	100	300	1250	RM90WN8	RW6	WN8
100	1	1.7	1.4	1.2	150	450	1100	RM100WN8A	RW6	WN8A
100	1	2.5	2.1	1.8	150	450	1250	RM100WN8	RW6	WN8
110	1	1.5	1.3	1.1	150	450	1100	RM110WN8A	RW6	WN8A
110	1	2.3	1.9	1.6	150	450	1250	RM110WN8	RW6	WN8
120	1	1.4	1.2	1	150	450	1100	RM120WN8A	RW6	WN8A
120	1	2.1	1.8	1.5	150	450	1250	RM120WN8	RW6	WN8
125	1	1.3	1.1	0.9	150	450	1100	RM125WN8A	RW6	WN8A
125	1	2	1.7	1.4	150	450	1250	RM125WN8	RW6	WN8

PLUGGABLE **REDUNDANT POWER PACKAGES**
Switching Regulated

■ Shipped Within 9 Days ■ Five Year Warranty (fans-one year)

AC-DC
single output

With Universal Input and Power Factor Correction

For more Specifications and information, see pages 6 & 7.

Extremely high overall reliability results from connecting two power sources so that one will continue to provide power to their load even if the other becomes inoperative. Acopian Redundant Power Packages have all the wiring done for you – not only isolation diodes, but also switches, meters, adjustments and output monitor circuits. All you need to do is connect the input and output terminals.

System Description: These models are functionally identical to the other Redundant Power Packages, but have the added advantage that a power supply can literally be changed in seconds.

Two Voltmeters (standard)
Two Ammeters (optional)
Audible Alarms (optional)
Handles (optional)

OPTIONS

Add option suffixes in alphabetical order.
Example: R24WP8XAHKS.

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

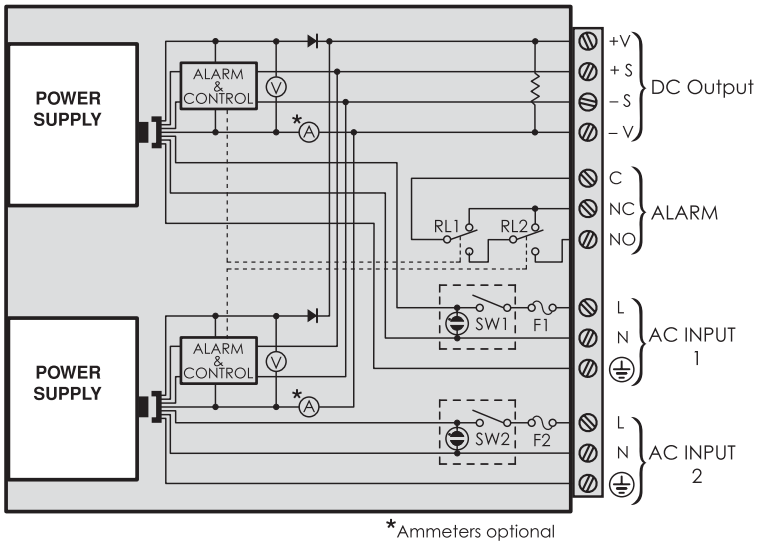
Audible Alarms: Front panel mounted, one for each power supply. Piercing whistle alerts personnel if the power supply's output deviates by more than 2 volts from the nominal rating (4 volts for 50 to 125 volt models). When this option is included and the alarm contacts are also used, meeting SELV levels requires that the input voltages be no greater than 125 VAC. To order, add suffix "K" to model number and $90.00 to price.

Separate Alarm Contacts for each Power Supply: If a power supply's output is incorrect, using two alarms permits remotely identifying that power supply. Each contact set is Form C (SPDT). To order, add suffix "R" to model number and $35.00 to price.

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

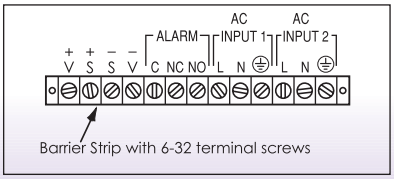
Chassis Slides: For racks having rear mounting rails spaced 20" to 26" behind the front panel. To order, add suffix "S" to model number and $90.00 to price.

Simplified Diagram for
Pluggable Redundant Power Packages



*Ammeters optional

CONNECTIONS:



Acopian Technical Company ■ P.O. Box 638, Easton, PA 18044
Phone: 610-258-5441 ■ Toll-free: 800-523-9478 ■ Fax: 610-258-2842

SPECIFICATIONS

Input Voltage: 90-265 VAC, 49-61 Hz, single phase. (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.)

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

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

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

Startup Time: 800 mS typical.

Remote Sensing: Compensates up to 0.5 volt drop per output line (1 volt for 50 to 125 volt models), within the limits of the output voltage adjustment range.

Holdup Time: 16 mS minimum.

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

Switching Frequency: 100 kHz (Typical).

Isolation: Input to output, input to case; 500 VAC. Output to case; 300 VAC.

Thermal Protection: Thermostat, self-resetting.

Cooling: Forced-air cooled; air enters front of system and exits from top.

CASE SIZE: 5RP13 5¼" x 19" panel, 12¾" deep (14 lb. 4 oz.)

Nominal Output Voltage	Adjust Range ±V	Output Current Amps. at 40°C	55°C	71°C	Ripple mV (@ 25 MHz BW) RMS	P-P	($) Price	Model	Case Size
3.3	.5	15.4	13	10.7	10	50	1390	R3.3WP8X	5RP13
3.3	.5	24	20.5	16.8	10	50	1550	R3.3WP8	5RP13
5	.5	15.4	13	10.7	10	50	1390	R5WP8X	5RP13
5	.5	24	20.5	16.8	10	50	1550	R5WP8	5RP13
6	.5	15	12.6	10.5	10	50	1390	R6WP8X	5RP13
6	.5	23	19.5	16.8	10	50	1550	R6WP8	5RP13
7	.5	14.7	12.4	10.3	10	50	1390	R7WP8X	5RP13
7	.5	23	19.5	16.1	10	50	1550	R7WP8	5RP13
8	.5	14.4	12	10	15	100	1390	R8WP8X	5RP13
8	.5	23	19.5	16.1	15	100	1550	R8WP8	5RP13
9	.5	14.1	12	9.8	15	100	1390	R9WP8X	5RP13
9	.5	22	18.7	15.4	15	100	1550	R9WP8	5RP13
10	.5	13.5	11.5	9.5	15	100	1390	R10WP8X	5RP13
10	.5	21	18.5	15	15	100	1550	R10WP8	5RP13
12	.5	12.3	10.5	8.6	15	100	1390	R12WP8X	5RP13
12	.5	20	17	14	15	100	1550	R12WP8	5RP13
13	.5	11.3	9.7	7.9	15	100	1390	R13WP8X	5RP13
13	.5	18.4	15.7	12.9	15	100	1550	R13WP8	5RP13
14	.5	10.9	9.3	7.6	15	100	1390	R14WP8X	5RP13
14	.5	17.6	15	12.3	15	100	1550	R14WP8	5RP13
15	.5	10.2	8.7	7.1	15	100	1390	R15WP8X	5RP13
15	.5	16.5	14	11.5	15	100	1550	R15WP8	5RP13
18	.5	8.5	7.2	5.9	15	100	1390	R18WP8X	5RP13
18	.5	13.7	11.6	9.5	15	100	1550	R18WP8	5RP13
20	.5	7.6	6.5	5.3	15	100	1390	R20WP8X	5RP13
20	.5	12.7	10.7	8.8	15	100	1550	R20WP8	5RP13
24	.5	7.2	6.1	5	15	100	1390	R24WP8X	5RP13
24	.5	11.5	9.8	8	15	100	1550	R24WP8	5RP13
25	.5	6.6	5.6	4.6	15	100	1390	R25WP8X	5RP13
25	.5	10.6	9	7.4	15	100	1550	R25WP8	5RP13
28	.5	5.9	5	4.1	15	100	1390	R28WP8X	5RP13
28	.5	9.5	8.1	6.7	15	100	1550	R28WP8	5RP13
30	.5	5.6	4.8	4	25	150	1390	R30WP8X	5RP13
30	.5	8.7	7.4	6.1	25	150	1550	R30WP8	5RP13
32	.5	5.2	4.5	3.7	25	150	1390	R32WP8X	5RP13
32	.5	8.3	7	5.8	25	150	1550	R32WP8	5RP13
36	.5	4.7	4	3.3	25	150	1390	R36WP8X	5RP13
36	.5	7.7	6.5	5.4	25	150	1550	R36WP8	5RP13
40	.5	4.2	3.6	3	25	150	1390	R40WP8X	5RP13
40	.5	6.8	5.8	4.8	25	150	1550	R40WP8	5RP13
48	.5	3.5	3	2.5	25	150	1390	R48WP8X	5RP13
48	.5	5.7	4.9	4	25	150	1550	R48WP8	5RP13
50	1	3.3	2.8	2.3	50	150	1390	R50WP8X	5RP13
50	1	5	4.3	3.5	50	150	1550	R50WP8	5RP13
55	1	3	2.5	2.1	50	150	1390	R55WP8X	5RP13
55	1	4.5	3.8	3.1	50	150	1550	R55WP8	5RP13
60	1	2.8	2.3	1.9	50	150	1390	R60WP8X	5RP13
60	1	4.2	3.5	2.9	50	150	1550	R60WP8	5RP13
70	1	2.4	2	1.7	67	200	1390	R70WP8X	5RP13
70	1	3.6	3.1	2.5	67	200	1550	R70WP8	5RP13
75	1	2.2	1.8	1.5	67	200	1390	R75WP8X	5RP13
75	1	3.3	2.8	2.3	67	200	1550	R75WP8	5RP13
80	1	2.1	1.7	1.4	67	200	1390	R80WP8X	5RP13
80	1	3.1	2.6	2.2	67	200	1550	R80WP8	5RP13
90	1	1.8	1.5	1.3	100	300	1390	R90WP8X	5RP13
90	1	2.8	2.4	2	100	300	1550	R90WP8	5RP13
100	1	1.7	1.4	1.2	150	450	1390	R100WP8X	5RP13
100	1	2.5	2.1	1.8	150	450	1550	R100WP8	5RP13
110	1	1.5	1.3	1.1	150	450	1390	R110WP8X	5RP13
110	1	2.3	1.9	1.6	150	450	1550	R110WP8	5RP13
120	1	1.4	1.2	1	150	450	1390	R120WP8X	5RP13
120	1	2.1	1.8	1.5	150	450	1550	R120WP8	5RP13
125	1	1.3	1.1	0.9	150	450	1390	R125WP8X	5RP13
125	1	2	1.7	1.4	150	450	1550	R125WP8	5RP13

PARALLELABLE SEMISYSTEM POWER SUPPLIES
Linear Regulated

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

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

(Handles optional)

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 7 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 "A" to model number and $45.00 to price.

Handles: Add suffix "H" to model number and $30.00 to 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 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 price. The "–230" option requires two additional days.

CUSTOM **REDUNDANT SYSTEMS** and **N+1 REDUNDANT SYSTEMS**

Built to your requirements

This Redundant System has remotely located power supplies and a shallow control panel for mounting in a cabinet door cutout.

Tell us what your requirements are, and we will modify a standard model or design a 'special' for you. These are some of the typical modifications we can easily make to our standard Redundant Systems:

- Non-standard output voltages
- Multiple outputs
- N+1 current sharing
- Capability to compensate large load line voltage drops
- Capability to provide high current surge at startup
- AC inputs from 90 to 265 volts
- DC inputs from 18 to 350 volts
- Adjustable trip voltage protection
- Special sizes and mechanical configurations

Acopian Technical Company ■ P.O. Box 638, Easton, PA 18044
Phone: 610-258-5441 ■ Toll-free: 800-523-9478 ■ Fax: 610-258-2842

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

. . . and ship it within 9 DAYS!

Five Year Warranty

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

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

Design your Power System on the phone or with the new online System Builder at www.acopian.com

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

- Shipped Within 9 Days
- Five Year Warranty

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 use the online System Builder at www.acopian.com or 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.

The five power supplies in this system each have a separate switch-type input breaker and LED 'Output Present' indicator. There is also an input switch for controlling all supplies simultaneously.

This seven output power system has only a power switch, power indicator and handles on the front panel.

A digital voltmeter and ammeter permit setting and monitoring the four outputs of this system with a resolution of better than 1%.

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.*
- *An input power switch with indicator is standard. List any additional assembly features you would like included – output controls, meters, test points, individual fusing or switches, handles, chassis slides, top/bottom cover screens, etc. (If you require non-stocked components, such as special connectors or circuit breakers, more than 9 days may be required.)*
- *Determine if any size restrictions are necessary. Assemblies of unusual size or shape (other than 19" wide, or more than 7" high) may require more than 9 days.*
- *Call Acopian and ask for the Power Systems Dept. or use the System Builder at www.acopian.com*
- *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**.*

This system has switchable metering with both coarse and fine adjustments for easily setting its three outputs.

Acopian Technical Company ■ P.O. Box 638, Easton, PA 18044
Phone: 610-258-5441 ■ Toll-free: 800-523-9478 ■ Fax: 610-258-2842

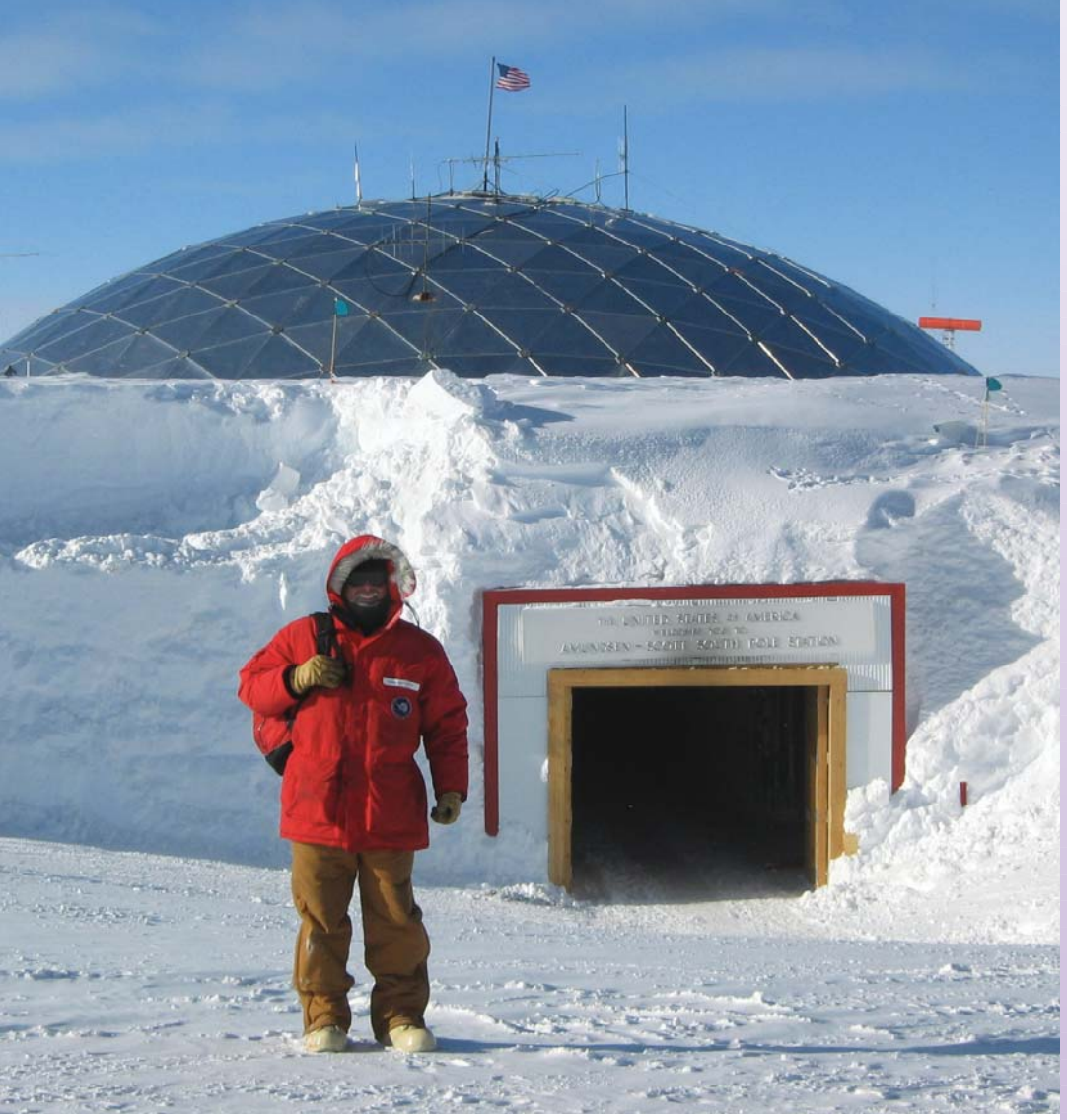


PHOTO COURTESY OF THE ICECUBE PROJECT

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

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

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

Simply call Acopian today and talk to one of our expert power systems designers about your requirements, or use the online **System Builder** at www.acopian.com. We'll provide you with a detailed description of the ideal, built-to-order multiple output power system to suit your needs – plus, a very competitive price. Your completely assembled, wired and tested power system will be shipped within nine working days. Or visit acopian.com for instant, easy access to thousands of individual power modules. Choose Acopian – the power supplies of choice for the world's leading engineers. Call today!

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

Acopian

Acopian Technical Company

1-800-523-9478 • www.acopian.com

LINEAR REGULATED AC-DC **RACK MOUNTING**
Single & Dual Tracking Outputs

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


(Handles optional)


(Meters and handles optional)

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:

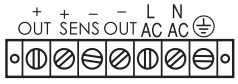
Single Output Models: –20 to +55°C.
Dual Output Models: –10 to +55°C.

Storage Temperature: –55 to +85°C.

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

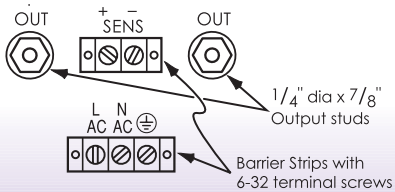
CONNECTIONS (Single Output models)**:**

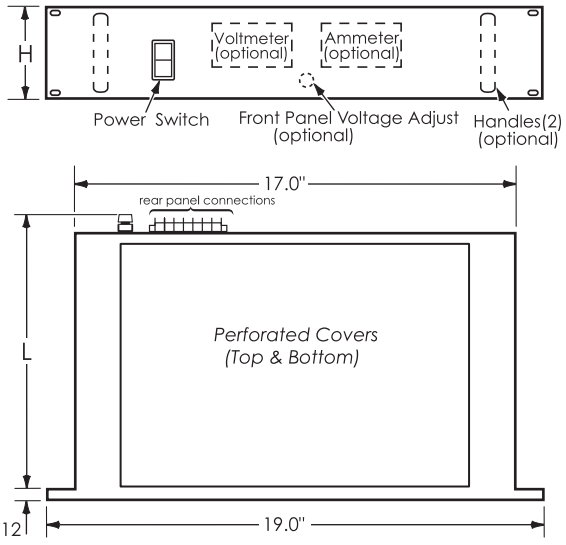
CASE SIZES 3P11 and 5P12:



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

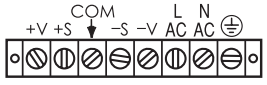
CASE SIZES 3P17 and 5P17:





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

Acopian Technical Company ■ P.O. Box 638, Easton, PA 18044
Phone: 610-258-5441 ■ Toll-free: 800-523-9478 ■ Fax: 610-258-2842

SINGLE OUTPUT

Nominal Output Voltage	Adjust Range ± V	Output Current Amps. at 40°C	55°C	Regulation Load* ±%	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

*or 2 mV, whichever is greater.

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

DUAL TRACKING OUTPUTS

Nominal Output Voltages	Adjust Range ± V	Amps. per Output at 40°C	55°C	Regulation Load ±%	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

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.

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.

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.

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

LINEAR REGULATED AC-DC **RACK MOUNTING**
Wide Adjust Output *(fixed & adjustable current limiting)*

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

(Handles optional)

(Meters and handles optional)

Similar to the rack mounting power supplies listed on pages 18 and 19, 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.

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.

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 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 prefix "E" to the model number and $25.00 to 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 210-250 VAC, 50-400 Hz. To order, add suffix "–230" to model number and $40.00 to price. The "–230" option requires two additional days.

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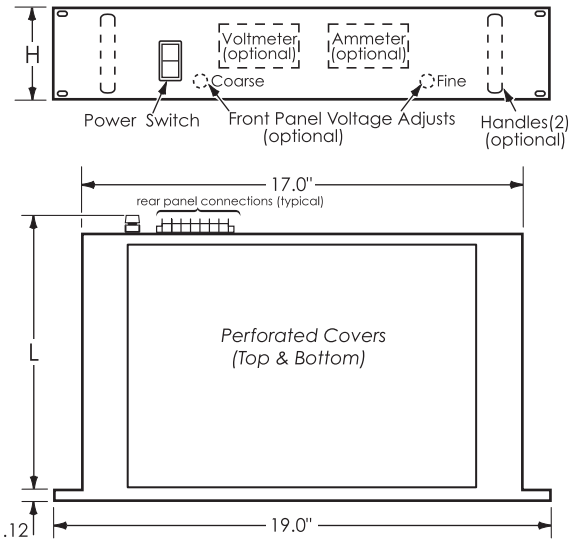
Phone: 610-258-5441 ■ Toll-free: 800-523-9478 ■ Fax: 610-258-2842

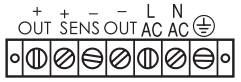
Output Voltage Range	Output Current Amps. at 40°C	55°C	71°C	Voltage Prgmg. Coeff. (Ω/V)	Case Size	Voltage Programmable Fixed Current Limiting Model	Price ($)	Voltage Programmable Adjust. Current Limiting Model	Price ($)
0-6	10.0	8.0	6.0	820	3P11	A06PX10	520	P06PX10	560
0-6	16.0	12.8	9.6	820	5P12	A06PX16	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
0-30	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.



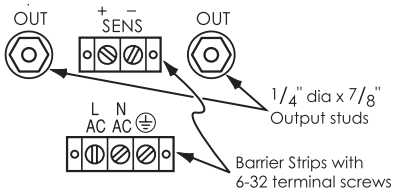
CONNECTIONS:

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″	16 lb.
3P17	3½″	16 13/16″	26 lb.
5P12	5¼″	11 15/16″	20 lb.
5P17	5¼″	16 13/16″	30 lb.

Power Supplies Programmable with a 0-10 Vdc Control Voltage

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

The output voltage may be manually controlled either at the power supply or remotely, or it may be programmed with the analog output from a PLC or digital-to-analog converter.

See pages 22 and 23

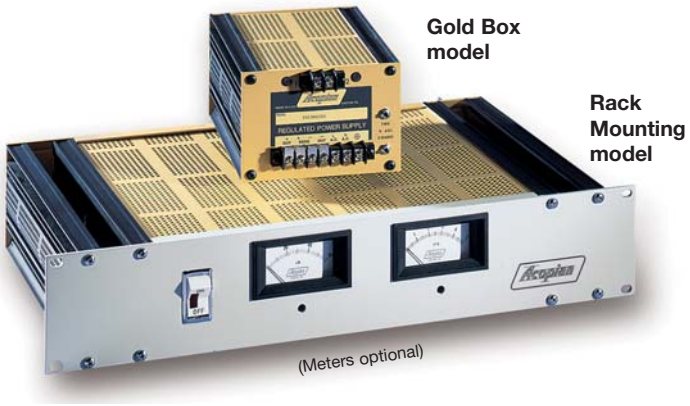
LINEAR REGULATED AC-DC
WIDE ADJUST OUTPUT PROGRAMMABLE
Gold Box & Rack Mounting *(with a control voltage or potentiometer)*

■ Shipped Within 3 Days (Gold Box models) ■ Shipped Within 9 Days (Rack models) ■ Five Year Warranty

NEW!

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

The output voltage may be manually controlled either at the power supply or remotely, or it may be programmed with the analog output from a PLC or digital-to-analog converter.



SPECIFICATIONS

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

Regulation, Ripple:
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.

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

Controls: Coarse and fine voltage adjustments are located on the front panel of Gold Box models and on the rear panel of Rack Mounting models.

Output Voltage Programming:

With a Control Voltage: The output voltage may be programmed from 0 to full rating by means of control voltage inputs of 0 to +10 Vdc. Linearity 1%. Contact factory for information on other input ranges.

With a Potentiometer: The output voltage may be programmed by means of a remotely located 5K potentiometer.

Current Limiting: Rolloff characteristic with automatic recovery.

Polarity: Output is floating; either positive or negative terminal may be grounded or floated up to 300 volts above ground. When using a control voltage input, its negative side must be connected to the –S (sense) terminal.

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

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

Storage Temperature: –55 to +85°C.

Mounting (Gold Box models): 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 29.

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 price as follows:

Maximum output of	6-50V	100V
Case size M6	$25.00	$35.00
Case size M9	$25.00	$35.00
Case size M13	$25.00	$35.00
Case size H11	$25.00	$35.00
Case size H16	$75.00	$85.00
Case size 3P11	$35.00	$45.00
Case size 5P12	$35.00	$45.00
Case size 3P17	$35.00	
Case size 5P17	$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 $40.00 to price. (For models in case sizes M6, M9 and M13, add $25.00.) The "–230" option requires two additional days.

Ammeter (Rack Mounting models): Add suffix "A" to model number and $45.00 to price.

Voltmeter (Rack Mounting models): Add suffix "F" to model number and $45.00 to price.

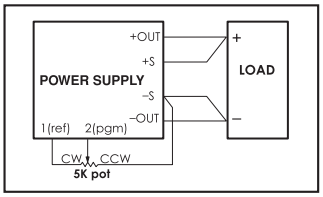
Handles (Rack Mounting models): Add suffix "H" to model number and $30.00 to price.

Front Panel Controls (Rack Mounting models): 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.

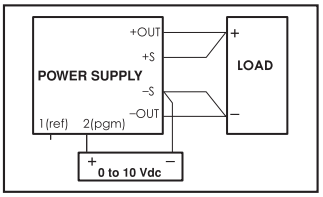
Acopian Technical Company ■ P.O. Box 638, Easton, PA 18044
Phone: 610-258-5441 ■ Toll-free: 800-523-9478 ■ Fax: 610-258-2842

GOLD BOX MODELS

Output Voltage Range	Output Current Amps. at 40°C	55°C	71°C	Case Size	Model	Price($)
0-6	1.2	1.2	1.2	M6	Y06MX120	205
0-6	2.0	2.0	2.0	M6	Y06MX200	225
0-6	3.0	2.5	2.0	M6	Y06MX300	255
0-6	5.0	4.0	3.0	M9	Y06MX500	300
0-6	8.0	7.0	6.0	M13	Y06MX800	340
0-6	12.0	10.0	7.0	H11	Y06HX1200	425
0-6	16.0	13.0	10.0	H16	Y06HX1600	500
0-15	1.0	1.0	1.0	M6	Y015MX100	195
0-15	2.0	1.6	1.2	M6	Y015MX200	245
0-15	3.0	2.4	1.8	M9	Y015MX300	300
0-15	5.0	4.0	2.5	M13	Y015MX500	340
0-15	8.0	6.0	4.0	H11	Y015HX800	440
0-15	10.0	8.0	6.0	H16	Y015HX1000	500
0-30	.50	.50	.50	M6	Y030MX50	215
0-30	1.0	1.0	1.0	M6	Y030MX100	245
0-30	1.6	1.4	1.2	M9	Y030MX160	285
0-30	2.5	2.0	1.5	M13	Y030MX250	335
0-30	4.0	3.0	2.0	H11	Y030HX400	450
0-30	5.0	4.0	3.0	H16	Y030HX500	515
0-50	.35	.34	.33	M6	Y050MX35	235
0-50	.60	.50	.40	M6	Y050MX60	285
0-50	.85	.75	.65	M9	Y050MX85	325
0-50	1.2	.96	.72	M13	Y050MX120	390
0-50	2.4	1.9	1.4	H11	Y050HX240	505
0-50	3.0	2.4	1.8	H16	Y050HX300	585
0-100	.10	.09	.08	M6	Y0100MX10	285
0-100	.25	.20	.15	M6	Y0100MX25	325
0-100	.45	.36	.27	M9	Y0100MX45	380
0-100	.60	.48	.36	M13	Y0100MX60	435
0-100	1.2	.96	.72	H11	Y0100HX120	550
0-100	1.5	1.2	.90	H16	Y0100HX150	625



Programming with a Potentiometer

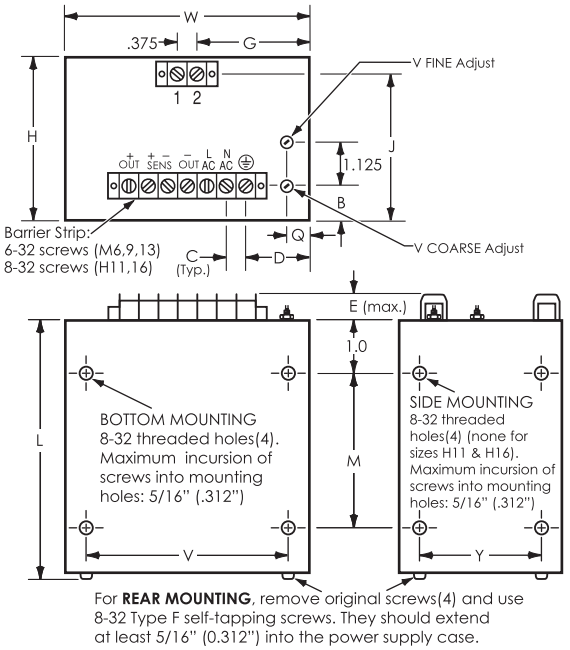


Programming with a Control Voltage

RACK MOUNTING MODELS

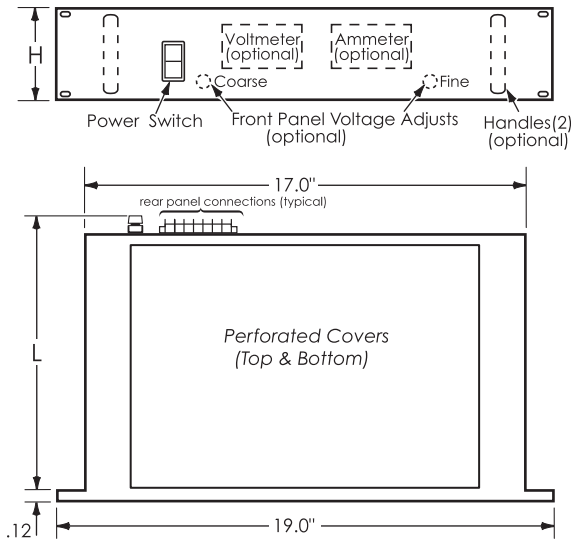
Output Voltage Range	Output Current Amps. at 40°C	55°C	71°C	Case Size	Model	Price($)
0-6	10.0	8.0	6.0	3P11	Y06PX10	600
0-6	16.0	12.8	9.6	5P12	Y06PX16	720
0-6	23.0	18.4	13.8	3P17	Y06PX23	875
0-6	30.0	24.0	18.0	5P17	Y06PX30	1010
0-15	7.0	5.6	4.2	3P11	Y015PX7	600
0-15	10.0	8.0	6.0	5P12	Y015PX10	720
0-15	13.0	10.4	7.8	3P17	Y015PX13	875
0-30	4.0	3.2	2.4	3P11	Y030PX4	600
0-30	5.0	4.0	3.0	5P12	Y030PX5	720
0-30	7.0	5.6	4.2	3P17	Y030PX7	875
0-30	9.0	7.2	5.4	5P17	Y030PX9	1010
0-50	2.4	1.9	1.5	3P11	Y050PX2	600
0-50	3.0	2.4	1.8	5P12	Y050PX3	720
0-50	5.0	4.0	3.0	5P17	Y050PX5	1010
0-100	1.2	.9	.7	3P11	Y0100PX1.2	655
0-100	1.5	1.2	.9	5P12	Y0100PX1.5	825

Gold Box



Case Size	L	W	H	M	V	Y	E	Q	B	C	D	G	J	Approx. Weight
M6	6.59	5.12	3.44	4.0	4.5	3.0	.58	.5	.75	.375	1.44	2.37	3.09	5 lb. 10 oz.
M9	9.25	5.12	3.44	6.0	4.5	3.0	.58	.5	.75	.375	1.44	2.37	3.09	6 lb. 7 oz.
M13	13.25	5.12	3.44	10.0	4.5	3.0	.58	.5	.75	.375	1.44	2.37	3.09	8 lb. 8 oz.
H11	11.25	7.37	5.12	8.0	6.75	4.56	.78	1.12	1.25	.562	2.25	3.75	4.72	13 lb. 3 oz.
H16	16.00	7.37	5.12	11.0	6.75	4.56	.78	1.12	1.25	.562	2.25	3.75	4.72	18 lb.

Rack Mounting



Case Size	H	L	Approx. Weight
3P11	3½″	10⅞″	16 lb.
3P17	3½″	16 13/16″	26 lb.
5P12	5¼″	11 15/16″	20 lb.
5P17	5¼″	16 13/16″	30 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 Acopian modular High Voltage supplies, but additionally feature calibrated 10-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 $40.00 to price. The "–230" option requires two additional days.

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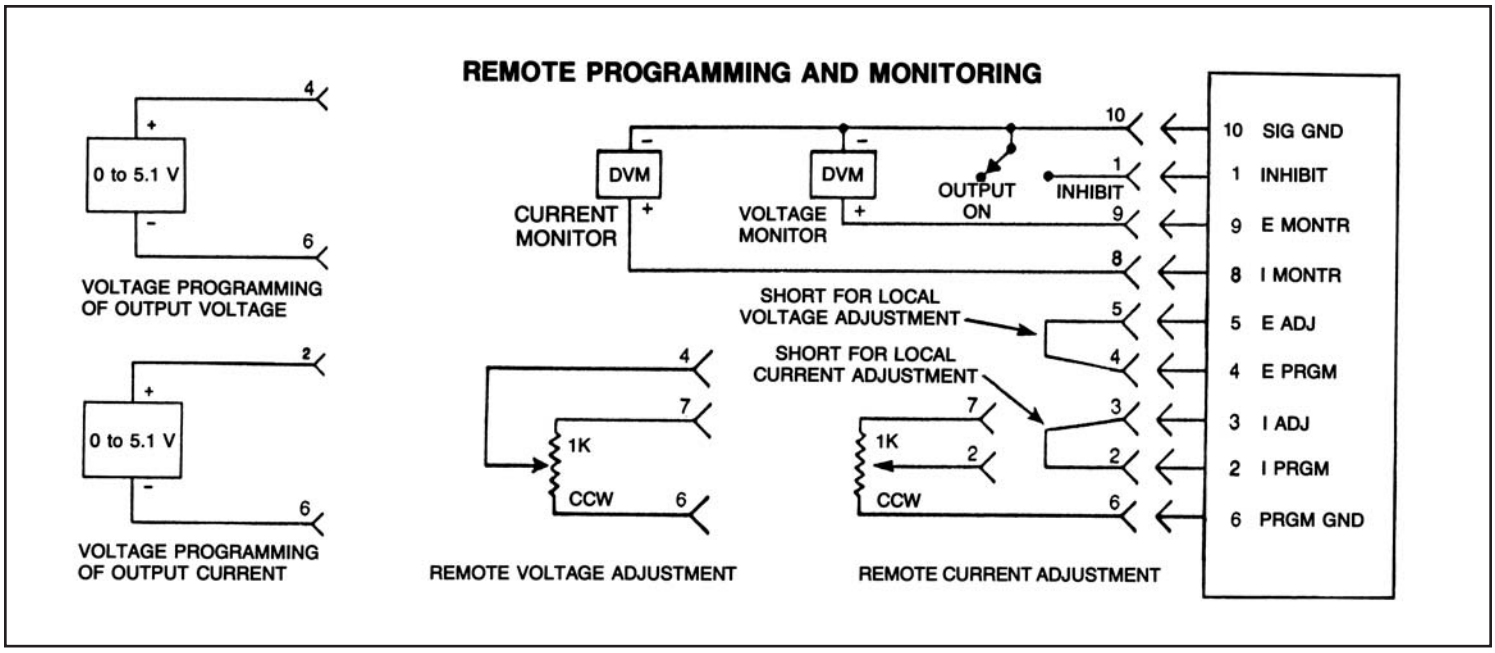
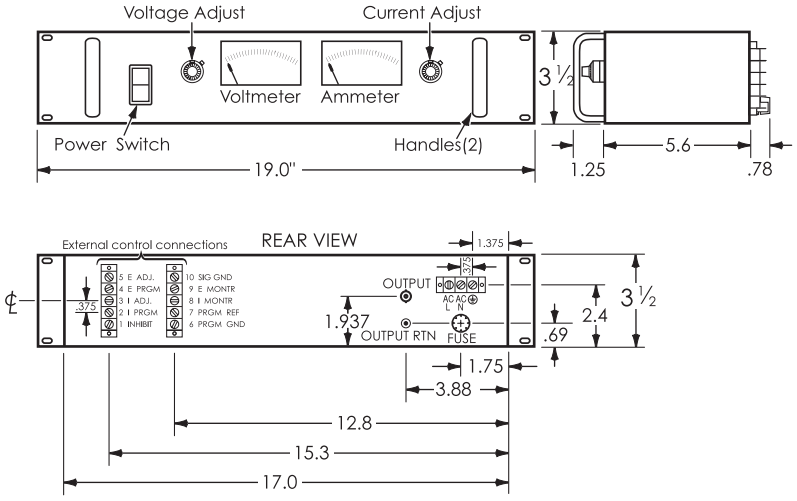


Output Range kVdc	Output Current mA	Output Monitor Ratio		($) Price	Model (Positive Output)*
		Voltage	Current mV/mA		
0-1	30	1,000:1	100:1	995	P01HP30
0-1	60	1,000:1	10:1	1095	P01HP60
0-1.5	20	1,000:1	100:1	1095	P01.5HP20
0-1.5	40	1,000:1	100:1	1195	P01.5HP40
0-2	15	1,000:1	100:1	995	P02HP15
0-2	30	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.

CIRCUIT ENCLOSURE BOXES

Versatile enclosures for housing prototypes, adapters, testers, etc.

Any case size shown in the Acopian catalog can be purchased as a Circuit Enclosure Box.

You can now package your own circuits in the same rugged casework used for Acopian power supplies.

SPECIFICATIONS

Moderate-dissipation components may be directly mounted to the case for heat sinking. Connectors, switches, controls and indicators are easily installed on the front and rear covers.

Sides and Bottom (Narrow Profile Enclosures): Attractive extruded aluminum channel (.08" thick) withstands even severe abuse.

Top Cover (Narrow Profile Enclosures): Perforated for ventilation, the sturdy aluminum top (0.032" thick) slides into slots without the need for mounting hardware.

Sides (Gold Box Enclosures): Grooved; attractive and rugged extruded aluminum sides (.08" thick) can withstand severe abuse.

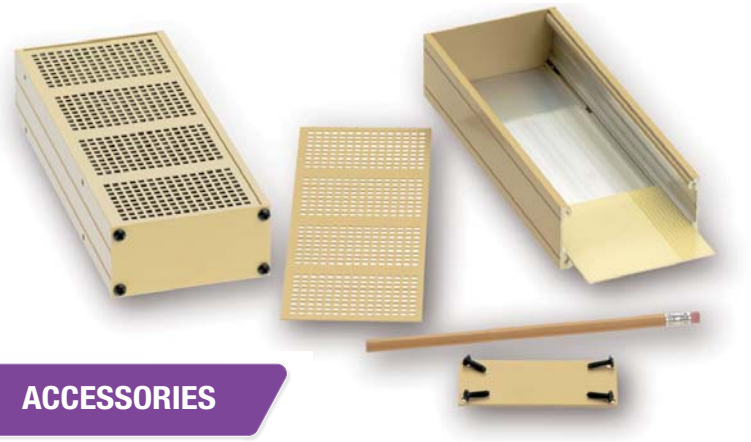
Top and Bottom Covers (Gold Box Enclosures): Perforated aluminum (0.032" thick); ideal for ventilation.

Front and Rear Covers: Aluminum (0.032" thick).

Internal Circuit Board Mounting (Narrow Profile Enclosures): Grooves ¼" above the inside bottom of the case are for holding a circuit board (0.032" thick).

Color: Flat gold (sides are flat black on Gold Box Enclosures).

Mounting: Threaded mounting holes are provided to permit mounting the boxes to an equipment frame or bracket. Accessory Mounting Kits are available for wall mounting or DIN Rail mounting (see page 29).



ACCESSORIES

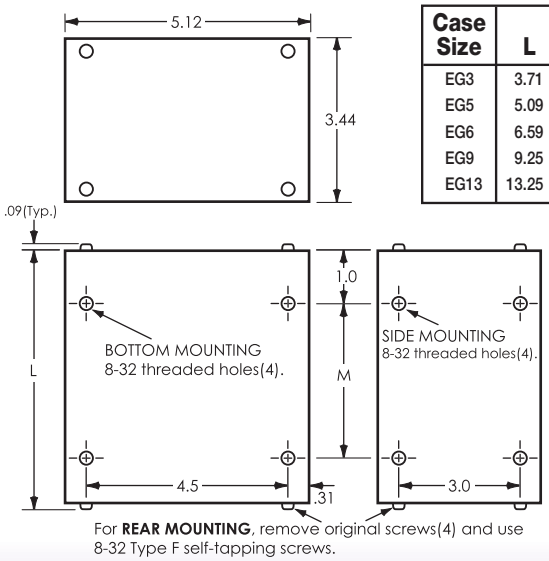
Circuit Board (for Narrow Profile Enclosures): Perforated board for mounting hand-wired components. Contact factory for sizes.

Mounting Kits: For wall mounting or DIN Rail mounting (see page 29).

Heat sink (for Narrow Profile Enclosures): High-dissipation semiconductors may be mounted on an accessory heat sink. (Provided with mounting hardware, including standoffs for thermal isolation. The heat sink is black anodized.) Contact factory.

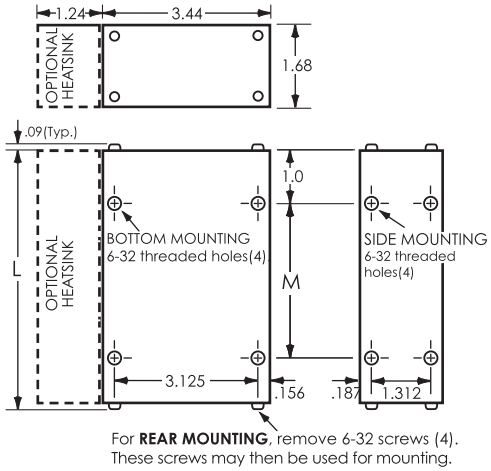
Heat sink (for Gold Box Enclosures): An optional heat sink can be ordered for the left side to replace the grooved aluminum side. High-dissipation semiconductors may be mounted on the accessory heat sink. To order, add suffix "H" to model number and $2.00 to price (for models EG9H and EG13H, add $4.00).

Gold Box Circuit Enclosure Boxes



Case Size	L	M	Approx. Weight	Price ($)
EG3	3.71	1.62	11 oz.	$25
EG5	5.09	3.0	14 oz.	$28
EG6	6.59	4.0	1 lb. 2 oz.	$29
EG9	9.25	6.0	1 lb. 7 oz.	$33
EG13	13.25	10.0	2 lb. 1 oz.	$38

Narrow Profile Circuit Enclosure Boxes



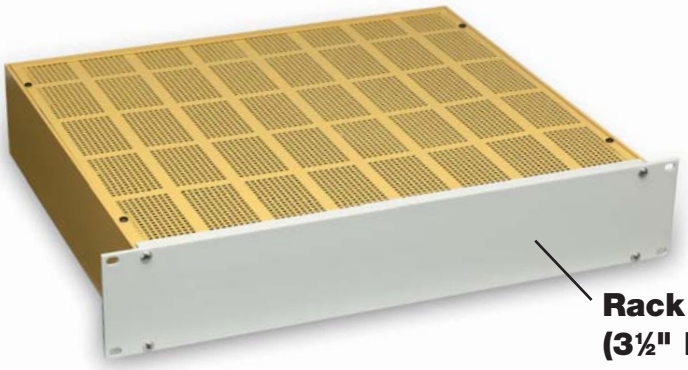
Case Size	L	M	Approx. Weight	Price ($)
EN6	6.59	4.0	9 oz.	$27.00
EN8	8.47	5.0	12 oz.	$30.00

Acopian Technical Company ■ P.O. Box 638, Easton, PA 18044
Phone: 610-258-5441 ■ Toll-free: 800-523-9478 ■ Fax: 610-258-2842

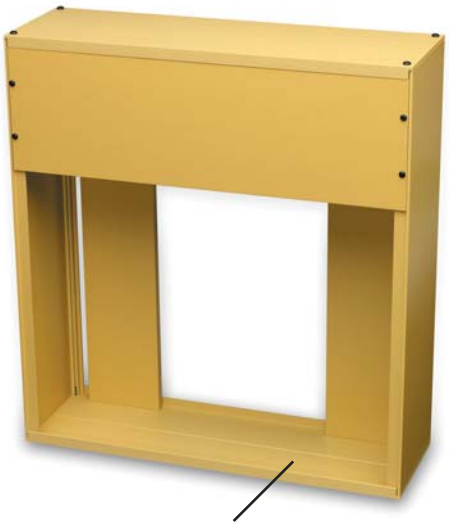
RACK MOUNTING ENCLOSURES

Versatile enclosures for housing power supplies and other electronic circuitry

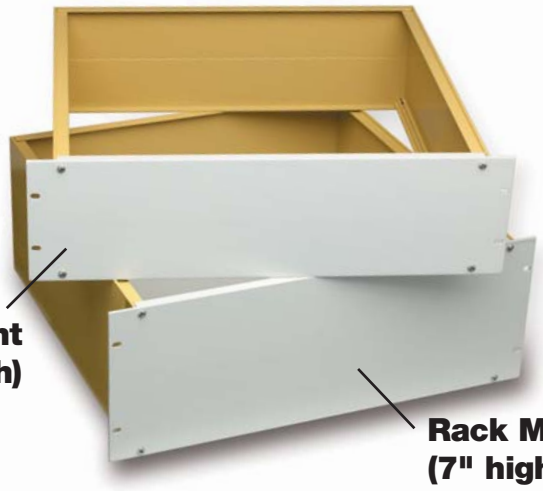
You can now package your own circuits in the same rugged casework used for Acopian power supplies.



Rack Mount (3½" high)



Wall Mount



Rack Mount (5¼" high)

Rack Mount (7" high)

Any case size shown in the Acopian catalog can be purchased 'empty' for your use.

Front and Rear Panels: Extruded aluminum (0.125" thick).
Side Panels: Extruded grooved aluminum (0.125" thick).
Bottom Braces: Extruded aluminum (0.125" thick).
Color: The front panels are finished in light gray enamel. The Side and Rear Panels and Braces are flat gold.

ACCESSORIES

Handles
Chassis Slides: For rack enclosures.
Top and Bottom Covers: Perforated aluminum (0.032" thick). Color is flat gold.

UNDER / OVERVOLTAGE MONITORS

These modules can be used with any manufacturer's power supply between 5 Vdc and 125 Vdc

■ Shipped Within 3 Days ■ Five Year Warranty

These Under/Overvoltage Monitors may be used as independent accessories for any power supply to control an external horn or light, or to signal your PLC . These modules can be used on power supplies with DC voltages from 5 to 125 Vdc. SPDT relay contacts switch if the power supply's output deviates by:

1.0 volt or more (for 5 volt outputs)
2.0 volts or more (for 6 to 48 volt outputs)
3.0 volts or more (for 49 to 125 volt outputs)

Enclosed UOV Monitor

NEW!

'Board with Leads' UOV Monitor

SPECIFICATIONS

Relay Contact Ratings: 120 VAC, 8A/60 Vdc, 1A.
(To comply with SELV requirements, limit switched voltage to 60 Vdc/42 VAC.)

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

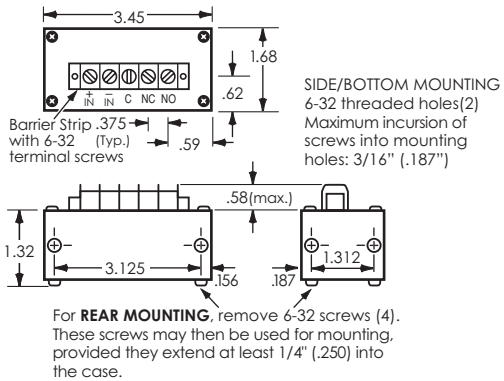
Storage Temperature: -40 to +85°C.

Power Supply Output	UOV Monitor Operating Current
5 Vdc to 11 Vdc	(typ) 80 mA
12 Vdc to 23 Vdc	(typ) 40 mA
24 Vdc to 47 Vdc	(typ) 25 mA
48 Vdc to 125 Vdc	(typ) 15 mA

Enclosed UOV Monitor

The front panel LED lights when voltage is within range.
Order model number AMC??, replacing the ?? with the DC voltage to be monitored. The price is $65.00.

Mounting: Threaded holes on the bottom and right side surface may be used for mounting. Accessory Mounting Kit NP6 (see page 29) is available to enable mounting the Enclosed UOV Monitor when the opposite side of the mounting surface is inaccessible. To order a DIN rail mounting unit, add suffix "–DIN" to the model number and $5.00 to the price.



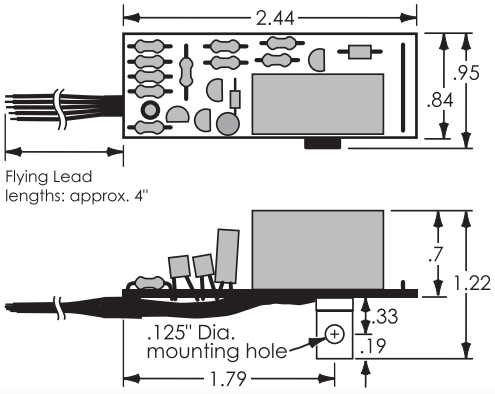
Case Size AMC
Approx. Weight: 4.8 oz.

'Board with leads' UOV Monitor

Order model number AMB??, replacing the ?? with the DC voltage to be monitored. The price is $35.00.

Mounting: An electrically isolated bracket with a .125" diameter mounting hole has been incorporated into the 'Board with leads' UOV Monitor to enable mounting in any orientation.

Red flying lead: Connects to '+ DC' being monitored.
Black flying lead: Connects to '– DC' being monitored.
White flying lead: Common (C) relay connection.
Green flying lead: Normally Closed (NC) relay connection.
Orange flying lead: Normally Open (NO) relay connection.

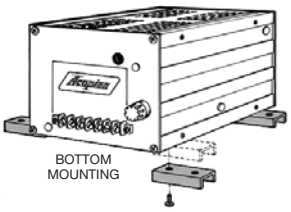


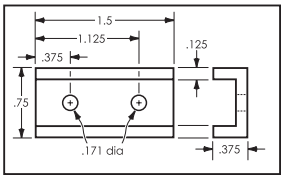
Case Size AMB
Approx. Weight: 0.9 oz.

Acopian Technical Company ■ P.O. Box 638, Easton, PA 18044
Phone: 610-258-5441 ■ Toll-free: 800-523-9478 ■ Fax: 610-258-2842

WALL MOUNTING KITS . . . $8

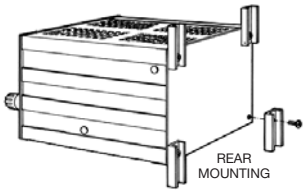
These kits provide a way of mounting power supplies on a wall or panel when the other side of the mounting surface is inaccessible. Each kit consists of four aluminum brackets and four machine screws for fastening them to the power supply, effectively adding mounting flanges to the power supply.





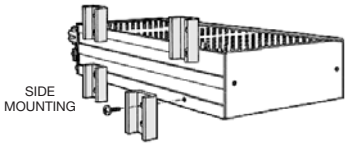
For Gold Box and modular High Voltage power supplies:

GB8 Mounting Kit *(#8-32 mounting holes)*
Can be used on these case sizes:
CM6, CM9, CM13, CH11, CH16, DG5, DG6, DG9, G3, G5, G5D, G6, G9, G13, GT5, GT6, GT9, GT13, H8, H11, H16, HD345, HD355, HA349, HA359, HT11, HT16, M6, M9, M13, RM6, RW6 TG5, TG6, TG9, TG13, TH11, WG7, WM6, WM9, Y3, Y5, Y6, YH11, YA



For Narrow Profile power supplies:

NP6 Mounting Kit *(#6-32 mounting holes)*
Can be used on these case sizes:
AMC, CN8T, DN6B, DN6A, DN8A, DN8, F6T, F8T, N8T, TN6T, WN6A, WN6B, WN8, WN8A



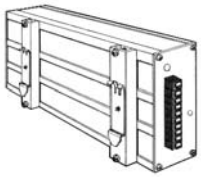
NP6L Mounting Kit *(#6-32 mounting holes)*
Model NP6L consists of two brackets 1.5" long as shown above, and two 2.5" long brackets (to extend beyond heat sink).
Can be used on these case sizes:
CN8H, N8H, TN8H

DIN RAIL MOUNTING KITS . . . $15

NPH35DIN Mounting Kit (Horizontal mounting)

Can be used on these case sizes:

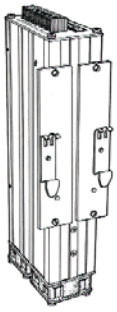
CN8H	DN6A	F6T	N8H	TN6T	WN6A
CN8T	DN6B	F8T	N8T	TN8H	WN6B
	DN8				WN8
	DN8A				WN8A



NPV35DIN Mounting Kit (Vertical mounting)

Can be used on these case sizes:

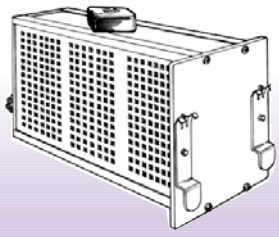
CN8H	DN6A	F6T	N8H	TN6T	WN6A
CN8T	DN6B	F8T	N8T	TN8H	WN6B
	DN8				WN8
	DN8A				WN8A



NPR35DIN Mounting Kit (Rear mounting)

Can be used on these case sizes:

CN8H	F6T	N8H	TN6T
CN8T	F8T	N8T	TN8H

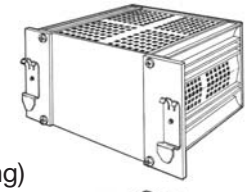


GR35DIN Mounting Kit (Rear mounting)

Can be used on these case sizes:

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

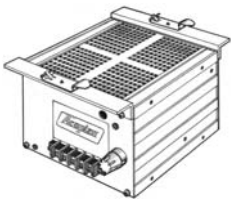
(Can be used, but not recommended, on case sizes: G13, GT13, M13, TG13)



GH35DIN Mounting Kit (Horizontal mounting)

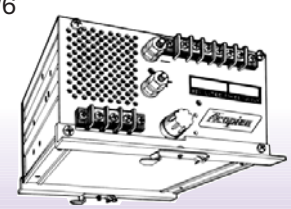
Can be used on these case sizes:

CM6	DG5	G3	GT5	M6	TG5	Y3
CM9	DG6	G5	GT6	M9	TG6	Y5
CM13	DG9	G5D	GT9	M13	TG9	Y6
		G6	GT13		TG13	
		G9				
		G13				



CH35DIN Mounting Kit (Horizontal mounting)
Can be used on these case sizes: RM6, RW6

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



What our customers say...

Technical Options Inc.

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

Steve Andrews, President

Lockheed Martin Operations and Support

"The power supplies we have purchased from Acopian are top quality …The technical assistance people are really cooperative and knowledgeable. You have always provided a sturdy and dependable product. Your catalog is attractive and full of clear, concise information. Purchases I've made were always received promptly. Thank you and looking forward to doing business in the future."

Molly Van Gieson, Logistics Specialist

Eta Engineering Consultants, P.S.C.

"I have used Acopian power supplies often in the past and was always very pleased with your products. I just received a new Acopian catalog and was impressed and pleased with your statement attached to the catalog: 'When you call Acopian … a real person will answer your call.' Thank you very much for this approach. I am also glad to see that some things are still made in the U.S.A."

Ralph Jackson, P.E., President

Retro Technologies Inc.

"I just wanted to say a quick thank you for all the help Acopian Technical Company provided us in identifying and arranging the delivery of the necessary power supplies we needed to get our customer running. In today's world of seemingly lackluster customer support, it was a pleasant surprise to be able to work with individuals who are knowledgeable, conscientious and courteous."

Ken Nordby, President

Tech Mecca, Inc.

"I have been specifying and installing Acopian power supplies in professional audio applications since 1979 or 1980. Gold Box Linear "A" supplies are the best I have come across for demanding audio applications such as analog recording and mixing consoles. Their regulation is very tight, and they are conservatively built."

John Klett, President and Owner

Georgia Tech Research Institute Aerospace, Transportation and Advanced Systems Laboratory

"Without question, Acopian is reliable. We've tried several different brands of power supplies, but sometimes they would just die for no apparent reason, even though we tried to oversize them as a safety factor. Then, we tried Acopian, and you just can't kill them – they just last forever. And that's what we need, because we build a lot of support equipment for electronic systems in military tracked vehicles that go out into harsh environments, get shook up, get hot, cold, dry, dusty… all sorts of environmental challenges. We don't hesitate to put Acopian power supplies into rugged environments because they just last. If Acopian made automobiles, I'd buy one without question."

David A. Price, Research Technologist (research engineer)

University of Arizona

"Acopian power supplies are very reliable, and your delivery dates can't be beat."

Dennis Smith, Engineer

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Unsurpassed Customer Service

Acopian answers your phone call with a live salesperson

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

Acopian can expedite shipment for you

If you require a power supply shipment earlier than our standard 3 or 9 Day Promise, we can usually ship sooner. We welcome the opportunity to work with you.

Acopian can customize power supplies for you

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

Acopian has a 5 year warranty

One of our customers sent us an old power supply with a note indicating that the supply had been in continuous use since 1972 (33 years!), but he had recently noticed that the output voltage was low. We found that the capacitors had dried up, so we replaced them and returned the supply to the customer, who thanked us and said he intends to keep using it.

We focus on making power supplies that will last a long time. There are power supplies that cost less than ours, or that are smaller than ours, but you won't find any that last longer than ours. All too often, low-priced supplies are densely packed, run hot, have short lifetimes and short warranties.

All Acopian metal-cased power products have a 5-year warranty, but you can expect them to last a lot longer.

Acopian's 3 Day Shipment Guarantee

. . . and we keep that promise. For more than 40 years, Acopian has been shipping AC to DC power modules within three days after receipt of an order. During this period, the Acopian line has expanded from the original Plug-in modules to a broad range of different types of power supplies.

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

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

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

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

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

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

Do options affect shipping time?

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

Has Acopian ever failed to meet this promise?

Never.

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

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

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

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

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

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

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

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

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

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

Narrow Profile Switching Power Supplies

DIN Rail mountable

Wall mountable

- Outputs from 3.3 to 125 Vdc, to 288 watts.
- Accepts either AC or DC input (90-265 VAC or 110-350 Vdc)
- Power Factor Correction
- Only 1.68" high.
- Pluggable terminal block.
- Five Year Warranty (fans-one year)
- Shipped Within 3 Days
- UL508 marking available
- CE

Standard mounting (threaded holes)

At www.acopian.com you will find: Our complete catalog ■ CAD drawings ■ Instruction sheets

Acopian GUARANTEES Prompt Shipment

The guaranteed lead time for every Acopian power supply is shown in our catalog and at **www.acopian.com**

- Most modular models are shipped within 3 Days!
- Rack mounting models are shipped within 9 Days!

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Call Toll-free: 800-523-9478
www.acopian.com

All Acopian power supplies made in U.S.A.

Recycled and recyclable paper.
Bulletin No 2006-53