Acopian

Since 1957

POWER SUPPLY CATALOG 2023

MILLIONS OF RELIABLE POWER SUPPLIES

Built and Shipped Within 3 Days.

- *Any voltage up to 30kV*
- *AC-DC & DC-DC*
- *Linear, Switching, Unregulated*
- *Customizable Power Solutions*
- *Lifelong Product Support*
- *Excellent Customer Service*
- *5-Year Warranties*

Order Factory Direct

VISA MasterCard AMERICAN EXPRESS

Made in the U.S.A.

Celebrating 50 Years of Excellence

Sarkis Acopian

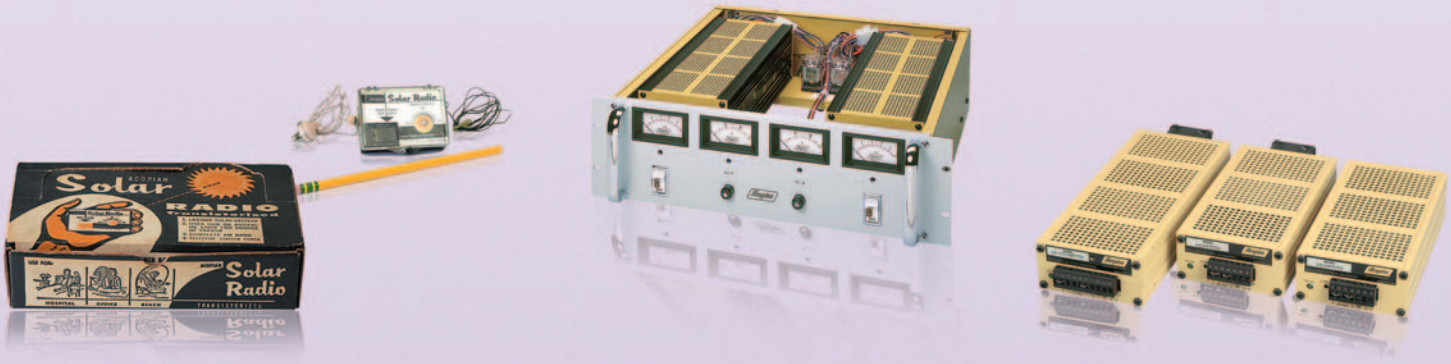
Having come to the United States as an immigrant in the mid 1940s, Sarkis Acopian, founder of Acopian Technical Company, attended Lafayette College in Easton, PA. During his time at Lafayette, he was called to serve in the U.S. Army. After being honorably discharged and returning to Lafayette, he graduated in 1951, earning a bachelor's degree in mechanical engineering. After graduation, Mr. Acopian was employed by Weller Electric Corp., where he designed a power sander and a soldering gun that became two of its main products. With just a small loan to start his own company and achieve his share of the American dream, he began by designing and manufacturing the first ever solar radio, a milestone of 1957 technology. The Acopian Solar Radio was promoted as 'Revolutionary – No Batteries or Outside Electrical Plug-ins – Uses light for its source of energy.'

When Mr. Acopian needed some power supplies and couldn't obtain them quickly, he made them himself, and – realizing that other engineers were experiencing the same problem – began to advertise them for sale. Soon, Acopian was building and shipping power supplies very quickly. This evolved into our 3 Day shipping policy – "up to 5 pieces of any power supply is guaranteed to ship within 3 Days after receipt of order." As the power supply line grew, larger and more complicated power supplies were introduced, but the same philosophy was followed for these larger supplies – "up to 2 pieces of these would ship within 9 days after receipt of order." We still pride ourselves on this remarkable ability. To this day, none of our competitors can consistently match our shipping promise dates.

Mr. Acopian, an industrialist, environmentalist and humanitarian, displayed extraordinary generosity to international, national and local non-profit agencies throughout his lifetime. His interest in ornithology resulted in establishing the Birds of Armenia Project, whose primary goal was to stimulate environmental awareness and establish a conservation ethic among the citizenry of Armenia.

Mr. Acopian's passion for higher education and the sciences is seen in his many philanthropic endeavors, which have included the Acopian Engineering Center at Lafayette College, the Acopian Center for Conservation Learning at Hawk Mountain Sanctuary and the Acopian Center for Ornithology at Muhlenberg College, as well as his endowing of the environmental education programs at the American University of Armenia and the Florida Institute of Technology. His great sense of gratitude to his adopted country played a major part in his being the largest individual donor to the World War II Memorial in Washington, DC.

In celebrating its 64th anniversary, Acopian continues to develop new lines of power supplies for the constantly changing needs of industry. But what will never change is our commitment to serving our valued customers with quality products, our 3-Day shipping guarantee and unsurpassed customer service.



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

- Gudrun Kleist, Engineering Associate
Lawrence Berkeley National Laboratory

About Acopian's 3-Day Shipment Guarantee:

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

Our unique 3-Day Shipping Guarantee has prompted many questions. Below are some of those most often asked:

What does Acopian's 3-Day Shipping Guarantee 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.

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

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

Do I have to ask for 3-Day Shipment of my order?
3-Day Shipment is automatic. In fact, you must tell us if you want the shipment delayed.

How long after you ship will I have the power supplies?
Transportation time varies with the carrier used. Unless otherwise requested, Acopian ships small orders by UPS Ground.

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

I've seen other power supply manufacturers advertise "same-day shipment." Isn't that better than 3-Day Shipment?
A typical vendor's "same-day shipment" advertisement can only be fulfilled if the power supplies you need are in stock. Otherwise, a four to six week delay is not unusual before inventory is replenished and your order is shipped.
Acopian's 3-Day Shipment promise applies to ALL 3-Day models (larger units ship within 9 days) and is not dependent on the quantity in stock. We build each unit after the order for that unit is received. If an order is needed faster, often times we can ship in fewer than 3 days.

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

ACOPIAN...

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

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

…has a 5-year warranty.
This is typical: In 2005, one of our customers sent us an old power supply with a note indicating that the supply had been in continuous use since 1972 (33 years!), but he had recently noticed that the output voltage was low. We found that the capacitors had dried up, replaced them and returned the supply to the customer, who thanked us and said he intends to keep using it. We focus on making power supplies that will last a long time. There are power supplies that cost less than ours, or that are smaller than ours, but you won't find any that last longer than ours. All too often, low-priced supplies are densely packed, run hot, have short lifetimes and short warranties. All Acopian metal-cased power products have a 5-year warranty, but you can expect them to last a lot longer.

Purchase Acopian... 3-Day Shipment, long lasting power supplies, and unsurpassed customer service.

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

- Steve Andrews, President
Technical Options, Inc.

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

- David A. , Research Technologist
Georgia Tech Research Institute

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CUSTOM POWER SOLUTIONS AC–DC & DC–DC (A)

Power Your Way!
Shipped within 9 DAYS!

REDUNDANT POWER PACKAGES AC–DC (B)

Includes models with Power Factor Correction and Universal Input
Shipped within 9 DAYS!

SWITCHING REGULATED AC–DC (C)

- *5-48 volts*
- *0.65-10 amps*
- *30-50 watts*

Shipped within 6 DAYS!

- *3.3-125 volts*
- *1.3-25 amps*
- *to 288 watts*

Shipped within 3 DAYS!

- *0-135 volts*
- *0-70 amps*
- *to 750 watts*

Shipped within 6 DAYS!

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

Shipped within 9 DAYS!

- *0-135 volts*
- *0-70 amps*
- *to 750 watts*

- *0-270 volts*
- *0-120 amps*
- *to 1400 watts*

DC–DC CONVERTERS, REGULATED (D)

- *5-48 Vdc input*
- *5-28 Vdc output*
- *0.2-2.5 amps*
- *6-15 watts*

Shipped within 3 DAYS!

- *9-18 Vdc input*
- *3.3-48 Vdc output*

- *18-350 Vdc input*
- *3.3-125 Vdc output*
- *1.3-25 amps*

Shipped within 3 DAYS!

HIGH VOLTAGE REGULATED AC–DC & DC–DC (E)

- *to 30 kV*
- *1-60 mA*
- *30-60 watts*

Shipped within 6 DAYS!

Shipped within 9 DAYS!

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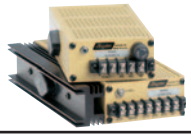
LINEAR REGULATED AC–DC (F)

• 1-75 volts
• 0.02 -2.5 amps
• 0.25 -15 watts
Shipped within 3 DAYS!

• 3.3-48 volts
• 0.2-2.5 amps
Shipped within 3 DAYS!

• 1-150 volts
• 0.05-3.5 amps
• 2-38 watts
Shipped within 3 DAYS!



• 0-200 volts
• 0.05-3.5 amps
• to 450 watts
Shipped within 3 DAYS!

• 0-150 volts
• 0-13.2 amps
• 2-38 watts
Shipped within 6 DAYS!

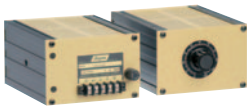
• 1-200 volts
• 0.02-5 amps
• 0.1-60 watts
Shipped within 3 DAYS!

• 0-150 volts
• 2.3-5 amps
• 3-784 watts
Shipped within 9 DAYS!

• 0-150 volts
• 0-100 amps

UNREGULATED AC–DC (G)

• 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
Shipped within 3 DAYS!

OTHER PRODUCTS & INFO (H)

Customized Power Supplies

AC-DC & DC-DC

- Shipped Within 9 Days
- Five Year Warranty

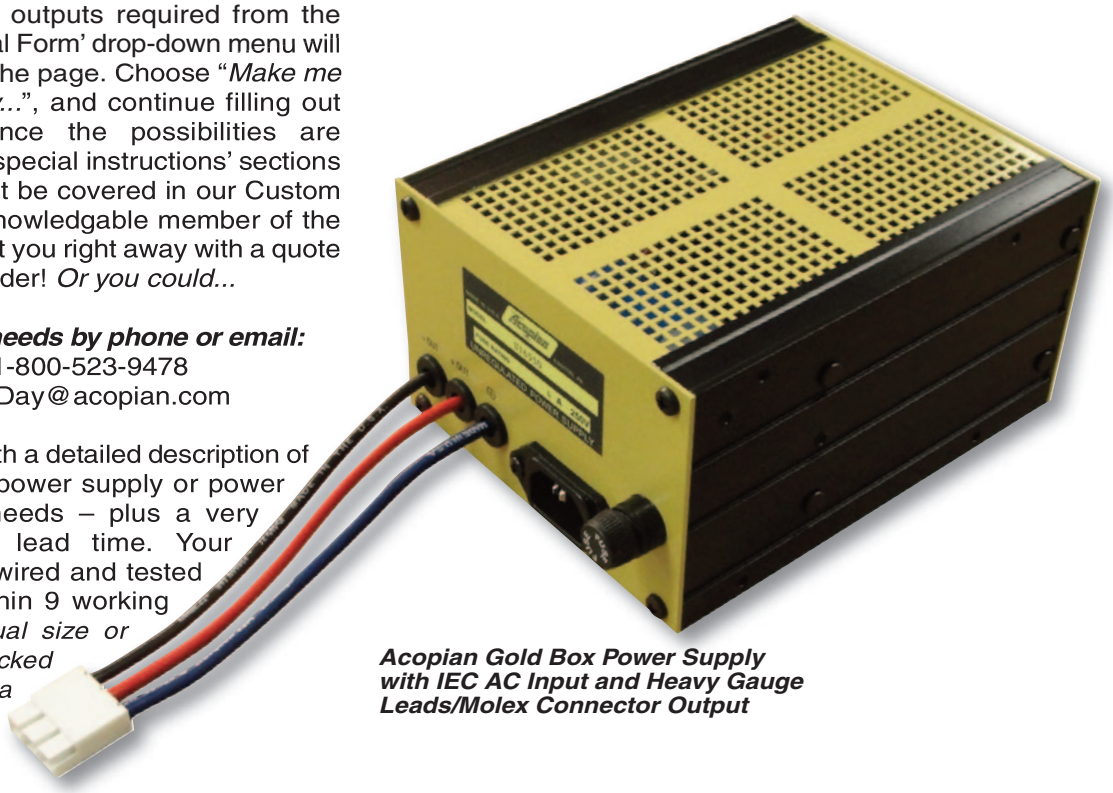
OVERVIEW

If you've found an Acopian power supply model that meets your size and/or output requirements, but only needs an option or two (or several!) that aren't offered standard - just let us know! We can meet your needs by customizing any power supply - and if a more complex solution is necessary, try spec'ing an Acopian Custom Power System (see pages A3 and A4).

Customize your Acopian power supply online:
Visit *www.acopian.com* and click on 'CUSTOM POWER SUPPLIES' in the header to begin using Acopian's online ***System Builder***. After you've selected the number of outputs required from the drop-down list, a 'Physical Form' drop-down menu will appear at the bottom of the page. Choose "*Make me a 'special' power supply...*", and continue filling out your requirements. Since the possibilities are endless, use the 'Notes/special instructions' sections for anything that may not be covered in our Custom Power Supply form. A knowledgable member of the Acopian team will contact you right away with a quote and lead time for your order! *Or you could...*

Contact us about your needs by phone or email:
Phone: 1-800-523-9478
Email: 3Day@acopian.com

We'll then provide you with a detailed description of the ideal, built-to-order power supply or power system to meet your needs – plus a very competitive price and lead time. Your completely assembled, wired and tested unit will be shipped within 9 working days *(systems of unusual size or shape requiring non-stocked components may require a few extra days)*.



Acopian Gold Box Power Supply with IEC AC Input and Heavy Gauge Leads/Molex Connector Output

Custom Power Solutions *Success Stories*

Premier University Laboratory in Need of a Streamlined Bentchtop Power Supply Solution

A university electronics tech sought a uniquely versatile solution to power various components in a laboratory test bench environment. An Acopian System Builder form was submitted by the customer and Acopian engineers took it from there: a modified Gold Box power supply with AC and DC outputs, individual power switches/indicators, fuses, and outputs via banana jacks provided a streamlined, cost-effective solution. What would have been an unwieldy and inefficent collection of power supplies, switches, wires, and connectors cobbled together was happily avoided, thanks to Acopian's expertise and design.

Power Supply Specs

- Modified Gold Box Power Supply
- 180V .05A DC Output, 6.3V 1.5A AC Output
- Banana Jack Output Connectors
- IEC AC Input
- Main, Aux AC Input Switches and Fuses
- DC Output Present LED

You can read more of our Success Stories at www.acopian.com/powersys.aspx

Simple Convenience Can Be a Good Reason to Consider Custom

Returning to Acopian after good experiences with standard power supply purchases in the past, a customer in the aerospace industry indentified a standard triple output power supply that met his required specifications. However, this time he decided to inquire about some additional features he'd always assumed would not be worth the additional expense. Looking only to add the convenience of an IEC AC input connector and power switch instead of the normal screw terminal AC input, he was pleasantly surprised at the minimal cost involved in providing these special features.

Because Acopian has been designing custom solutions for well over half a century, what many would assume to be quite costly can be provided for a modest fee in most cases. Contact Acopian for your custom power solution today!

Power Supply Specs

- Modified Triple Output Power Supply
- 5V 3A, 5V 1A, 12V .6A DC Outputs
- IEC AC Input with Switch

Custom Power Systems

AC-DC & DC-DC

- Shipped Within 9 Days
- Five Year Warranty

OVERVIEW

We have millions of standard power supply models, but if you can't find what you need in our standard stand-alone models, we can fill your needs with one of our Power Systems. (We can also easily modify standard power supplies to meet customer requirements - see pages A1 and A2.)

To use Acopian's online ***System Builder***, visit *www.acopian.com* and click 'CUSTOM POWER SUPPLIES' at the top of the page. Begin by selecting your required number of outputs from the drop-down menu. Then, simply 'check' or type in whichever items you require. Since the possibilities are endless, use the 'Notes/special instructions' sections for anything that may not be covered in the *Custom Power Supply* ***System Builder***. Or contact us about your needs by phone or email:

Phone: 1-800-523-9478
Email: 3Day@acopian.com

We'll then provide you with a detailed description of the ideal, built-to-order power system or power supply to meet your needs – plus a very competitive price and lead time. Your completely assembled, wired and tested unit will be shipped within 9 working days *(systems of unusual size or shape requiring non-stocked components may require a few extra days)*.

Acopian Power System built into a NEMA Enclosure

SOME AVAILABLE OPTIONS & FEATURES...

- **AC-DC & DC-DC**
- **1-60 Outputs**
- **0-30kV**
- **Non-standard Input/Output Voltages**
- **Up to 2400W**

- **Digital IF's**
- **RS232, RS485, USB, Ethernet**
- **Metering**
- **Connectors**
- **Switches**
- **LED Indicators**

- **Rack Mount**
- **Wall Mount**
- **DIN Rail Mount**
- **Benchtop**
- **1U-7U High**
- **Pluggable Configuration**

- **Switching**
- **Linear**
- **Unregulated**
- **Programmable**
- **High Voltage**
- **Redundant**
- **Multiple Output**

- **Made in USA**
- **Ships in 9 Days**
- **5-Year Warranty**
- **Ultra-Reliable**

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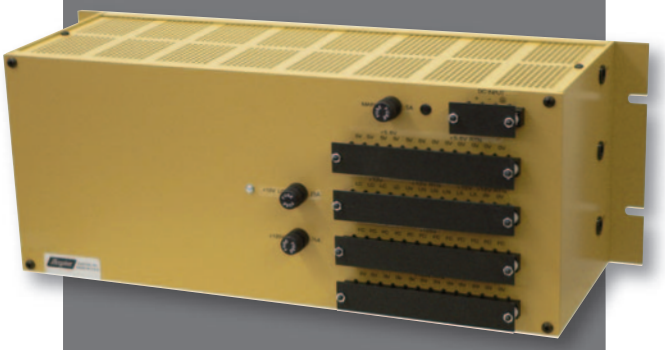
Custom Power Solutions *Success Stories*

Acopian Engineers Match Features of Legacy Systems

A potential customer approached Acopian needing to replace a power supply manufactured by a company that had gone out of business. The DC-DC power supplies were used to power alarm systems at multiple facilities and the customer needed an exact replacement with regards to output ratings, number of connections, physical form, and mounting provisions. They'd been sending the power supplies to a third party repair shop, but this approach had become impractical. They needed help. Unfortunately, their request seemed to be lacking some critical information so our engineers requested photos of the existing power supplies in addition to the literature that originally accompanied them. This considerate approach allowed Acopian to refine the specifications prior to production, saving them time, money, and stress.

System Specs



- Wall Mount
- 125 Volt DC Input
- 5.6V 4A, 12V 15A, 125V .5A DC Outputs
- Six Sets of Output Terminals

You can read more of our Success Stories at www.acopian.com/powersys.aspx

Highly Specialized Power Systems for Highly Specialized Glass and Ceramics

A world leader in glass and ceramics was in need of a highly specialized system to power several other components mounted in a large test cabinet. Luckily, they called Acopian. With many unique power requirements to consider, our engineers worked with the customer to design an all-in-one solution which included: circuit breaker protection, remote control of outputs via solid state relays, and multiple AC duplex receptacles, both regulated and unregulated—just to name a few of the custom power system's intricate features.

System Specs

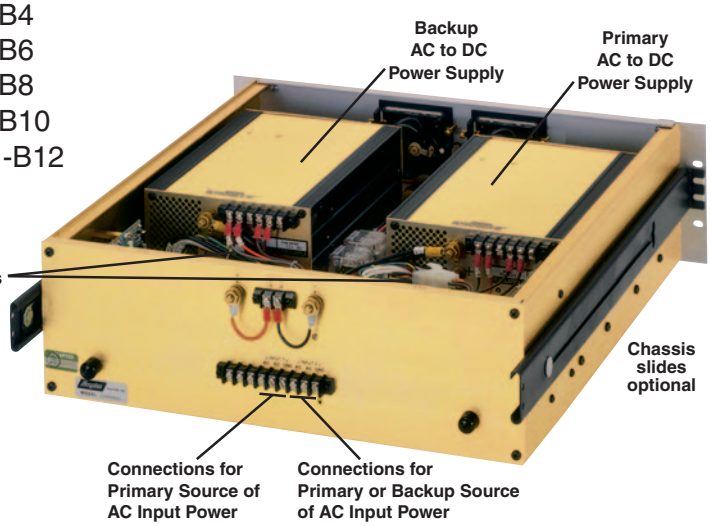
- Rack Mount
- 6V 2A, (2)12V .75A, 5V .75A, 9V 2A DC Outputs
- Circular Output Connectors
- Two IEC AC Inputs
- Five Input Circuit Breakers
- Four Sets of AC Duplex Receptacles
- Remote Control via Four Solid State Relays

REDUNDANT POWER PACKAGES and *MODULAR REDUNDANT SYSTEMS*

(Rack Mounting, Wall Mounting & Pluggable) ***(Three separate modules)***

AC-DC
single output

- Shipped Within 9 Days
- U.L. Recognized (Power Packages on pages B3-B6)
- Five Year Warranty



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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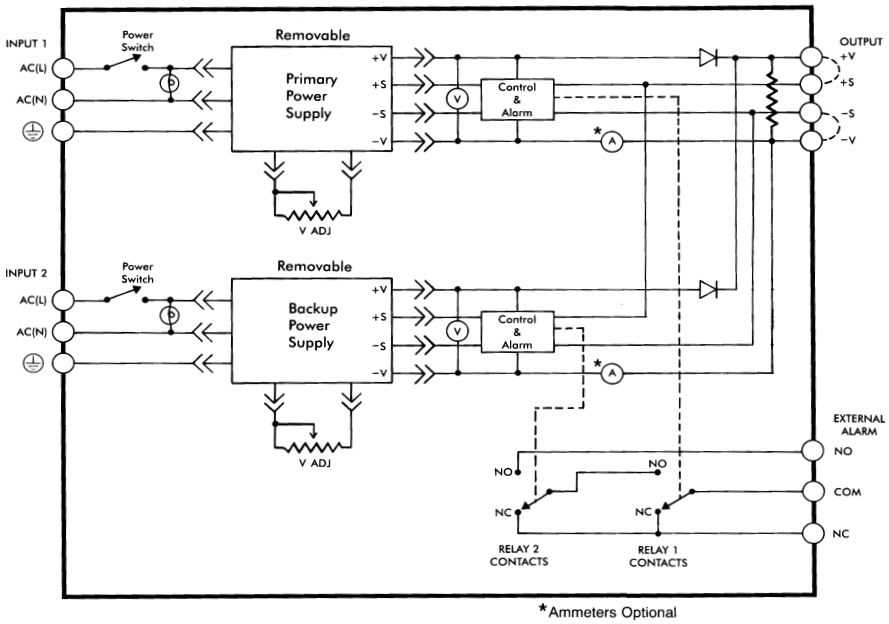
Simplified Diagram for Redundant Power Packages

(see page B8 for Simplified Diagram of the Pluggable Redundant Power Packages or page B10 for Simplified Diagram of the Modular Redundant Systems)



*Ammeters Optional

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, 49-420 Hz, single phase.
Switching (Modular Redundant Systems): 90-265 VAC, 49-420 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 tables.
Backup mode: 0.2 volt less than nominal voltage shown in tables.

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 60Vdc/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

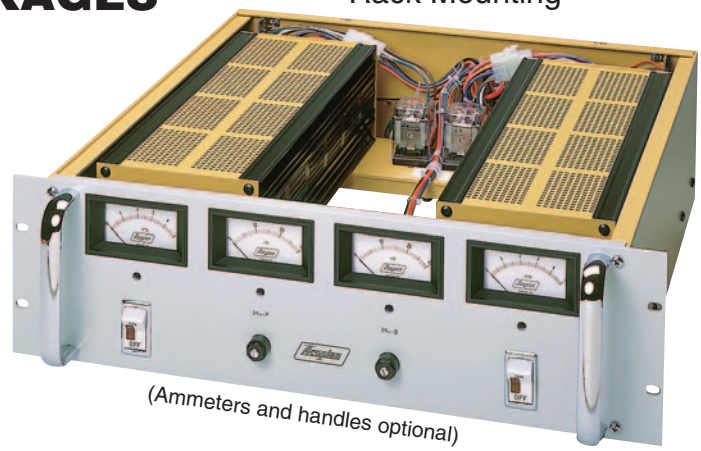
Rack Mounting & Wall Mounting

AC-DC

single output

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

Rack Mounting



(Ammeters and handles 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 B1 & B2.

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. To order, add suffix "A" to model number.

Audible Alarms: Piercing whistle alerts personnel to a voltage lower than normal. Front panel mounted, one for each power supply. 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.

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.(Cannot combine "K" and "R" options on Wall Mounting units.)

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

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.

230 Volt Input: For operation on inputs of 210-250 VAC, 50-400 Hz. To order, add suffix "–230" to model number. This 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: Model	Case Size	Wall Mounting Models: Model	Case Size
5	.5	2.6	2.5	2.4	1	R5N8X	3R14	RWL5N8X	317R18
5	.5	5.3	4.4	3.5	1	R5M6	5R14	RWL5M6	517R18
5	.5	11	9.3	7.5	1	R5M13	5R18	RWL5M13X	517R20
5	.5	21	17	14	1	R5H11	7R18	RWL5H11	719R20
5	.5	28	23	19	1	R5H16	7R20	RWL5H16	719R25
12	.5	1.5	1.5	1.5	1	R12N8X	3R14	RWL12N8X	317R18
12	.5	3.5	3	2.5	1	R12M6	5R14	RWL12M6	517R18
12	.5	8	7.5	7	1	R12M13	5R18	RWL12M13X	517R20
12	.5	16	13.8	11.2	1	R12H11	7R18	RWL12H11	719R20
12	.5	20	17	14.2	1	R12H16	7R20	RWL12H16	719R25
15	.5	1.5	1.5	1.5	1	R15N8X	3R14	RWL15N8X	317R18
15	.5	4	3.8	3.6	1	R15M9	5R14	RWL15M9	517R18
15	.5	6.5	6	5.5	1	R15M13	5R18	RWL15M13X	517R20
15	.5	14.7	12.5	10.3	1	R15H11	7R18	RWL15H11	719R20
15	.5	18.7	16	13.3	1	R15H16	7R20	RWL15H16	719R25
24	.5	.9	.9	.9	1	R24N8X	3R14	RWL24N8X	317R18
24	.5	3	2.7	2.4	1	R24M9	5R14	RWL24M9	517R18
24	.5	5	5	5	1	R24M13	5R18	RWL24M13X	517R20
24	.5	11.7	10.2	8.7	1	R24H11	7R18	RWL24H11	719R20
24	.5	14.7	12.7	10.7	1	R24H16	7R20	RWL24H16	719R25
28	.5	1	1	1	1	R28N8X	3R14	RWL28N8X	317R18
28	.5	2.7	2.6	2.5	1	R28M9	5R14	RWL28M9	517R18
28	.5	5	5	5	1	R28M13	5R18	RWL28M13X	517R20
28	.5	10.5	9.2	8	1	R28H11	7R18	RWL28H11	719R20
28	.5	14	12	10	1	R28H16	7R20	RWL28H16	719R25
48	.5	.4	.4	.4	1	R48N8T	3R14	RWL48N8T	317R18
48	.5	1.6	1.4	1.2	1	R48M9	5R14	RWL48M9	517R18
48	.5	3	3	3	1	R48M13	5R18	RWL48M13X	517R20
48	.5	6	5	4	1	R48H11	7R18	RWL48H11	719R20
48	.5	8.5	7.2	5.5	1	R48H16	7R20	RWL48H16	719R25
60	1	.25	.25	.25	1	R60N8T	3R14	RWL60N8T	317R18
60	1	1	.9	.8	1	R60M9	5R14	RWL60M9	517R18
60	1	2.5	2.1	1.7	1	R60M13	5R18	RWL60M13X	517R20
60	1	5	4.1	3.3	1	R60H11	7R18	RWL60H11	719R20
60	1	7	5.8	4.6	1	R60H16	7R20	RWL60H16	719R25
120	1	.12	.12	.12	1	R120N8T	3R14	RWL120N8T	317R18
120	1	.5	.5	.4	1	R120M6	5R14	RWL120M6	517R18
120	1	1.2	1.1	1	1	R120M13	5R18	RWL120M13X	517R20
120	1	2.5	2	1.6	1	R120H11	7R18	RWL120H11	719R20
120	1	3.5	2.9	2.3	1	R120H16	7R20	RWL120H16	719R25
125	1	.12	.12	.12	1	R125N8T	3R14	RWL125N8T	317R18
125	1	.4	.4	.4	1	R125M6	5R14	RWL125M6	517R18
125	1	1.2	1.1	1	1	R125M13	5R18	RWL125M13X	517R20
125	1	2.4	1.9	1.5	1	R125H11	7R18	RWL125H11	719R20
125	1	3.4	2.8	2.3	1	R125H16	7R20	RWL125H16	719R25

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Wall Mounting

(Ammeters optional)

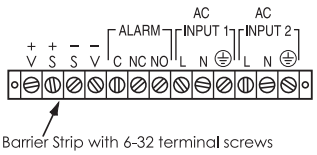
CASE SIZES:

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.)

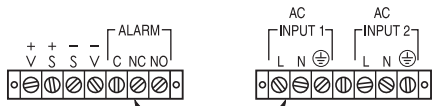
Wall Mounting: See page B6.

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



Barrier Strip with 6-32 terminal screws

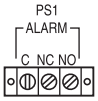
CONNECTIONS FOR CASE SIZES 7R18, 7R20, 719R20, and 719R25:



Barrier Strips with 8-32 terminal screws

Additional CONNECTIONS for "R" Option: Separate Alarm Contacts for each Power Supply

(Note: Connections for 'ALARM' in above drawings become connections for 'PS2 ALARM')



PARALLELABLE "SEMISYSTEM" POWER SUPPLIES

LINEAR REGULATED

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

(Handles optional)

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

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 B2 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	Model	Case Size
5	.5	55	43	1	R5PH17	5R17
12	.5	41	32	1	R12PH17	5R17
15	.5	37	29	1	R15PH17	5R17
24	.5	28	22	1	R24PH17	5R17
28	.5	27	21	1	R28PH17	5R17
48	.5	15	12	1	R48P17	5R17

OPTIONS

Add option suffixes in alphabetical order.

Ammeter: To order, add suffix letter "A" to model number.

Handles: To order, add suffix "H" to model number.

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. To order, add suffix "K" to model number.

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

SWITCHING REGULATED

REDUNDANT POWER PACKAGES

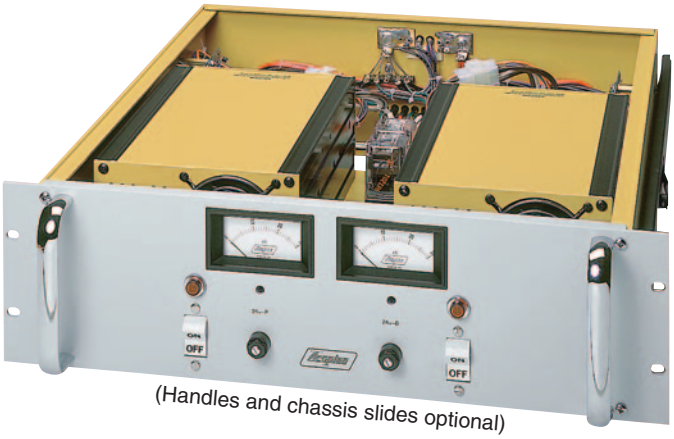
Rack Mounting & Wall Mounting

AC-DC

single output

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

Rack Mounting



(Handles and chassis slides 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.

OPTIONS

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

Ammeters: One for each output. Add suffix letter "A" to model number.

Audible Alarms: Piercing whistle alerts personnel if the power supply's output deviates by more than 2 volts from the nominal rating. Front panel mounted, one for each power supply. 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.

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. (Cannot combine "K" and "R" options on Wall Mounting units.)

Handles (for Rack Mounting models)**:** To order, add suffix "H" to model number.

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.

230 Volt Input: For operation on inputs of 180-264 VAC, 49-61 Hz. To order, add suffix "–230" to model number. This option requires two additional days.

For Specifications and other information, see pages B1 & B2.

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 B6.

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 Model	Case Size	Wall Mounting Models Model	Case Size
12	.5	26	22	18	15	100	R12W6	5RW16	RWL12W6	519RW15
12	.5	41	35	28	15	100	R12W9	5RW18	RWL12W9	519RW18
12	.5	61	52	42	15	100	R12G7	5RW22	RWL12G7	522RW17
15	.5	21	18	15	15	100	R15W6	5RW16	RWL15W6	519RW15
15	.5	33	28	23	15	100	R15W9	5RW18	RWL15W9	519RW18
15	.5	49	42	34	15	100	R15G7	5RW22	RWL15G7	522RW17
24	.5	15	13	11	15	100	R24W6	5RW16	RWL24W6	519RW15
24	.5	24	21	17	15	100	R24W9	5RW18	RWL24W9	519RW18
24	.5	36	31	25	15	100	R24G7	5RW22	RWL24G7	522RW17
24	.5	50	42	35	15	100	R24W7	5RW22	RWL24W7	522RW17
28	.5	13	11	9	15	100	R28W6	5RW16	RWL28W6	519RW15
28	.5	20	17	14	15	100	R28W9	5RW18	RWL28W9	519RW18
28	.5	30	26	21	15	100	R28G7	5RW22	RWL28G7	522RW17
28	.5	42	35	29	15	100	R28W7	5RW22	RWL28W7	522RW17
48	.5	8	7	5	25	150	R48W6	5RW16	RWL48W6	519RW15
48	.5	12	10	8	25	150	R48W9	5RW18	RWL48W9	519RW18
48	.5	19	16	13	25	150	R48G7	5RW22	RWL48G7	522RW17
48	.5	25	21	17	25	150	R48W7	5RW22	RWL48W7	522RW17

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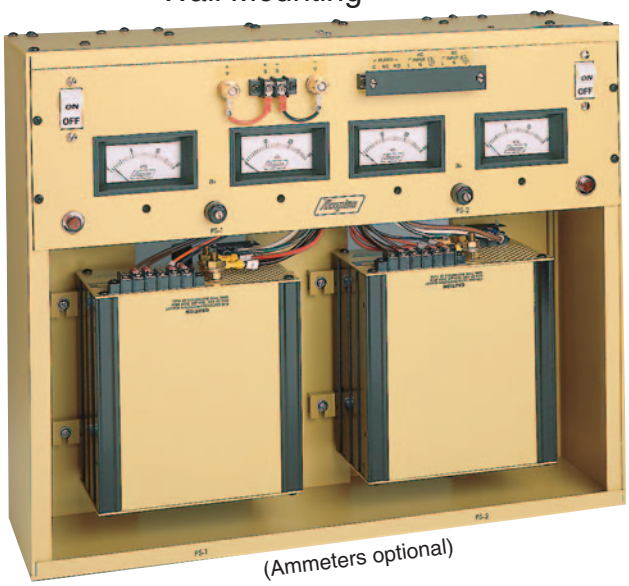
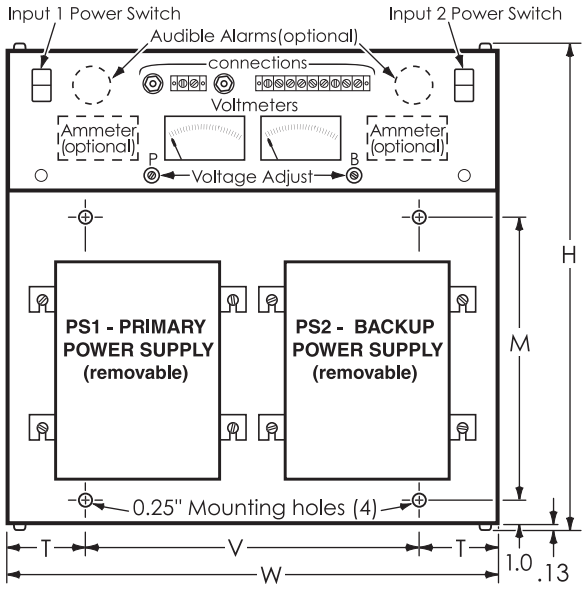
Wall Mounting



(Ammeters optional)

Wall Mounting Case Sizes:

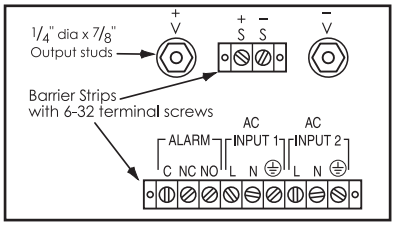


Case Size	H	W	M	V	T	Depth	Approx. Weight
317R18	18½	17	11	14	1½	4¼	18 lb.
517R18	18½	17	11	14	1½	6	22-26 lb.
517R20	20½	17	13	13	2	6	34 lb.
519RW15	15½	19	8	13	3	6 1/16	24 lb.
519RW18	18½	19	11	13	3	6 1/16	27 lb.
522RW17	17¼	22½	10	16½	3	6 1/16	33 lb.
719R20	20½	19	13	13	3	7¾	58 lb.
719R25	25½	19	18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

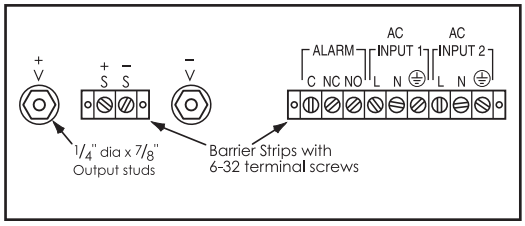
All dimensions in inches.

CONNECTIONS:

RACK MOUNTING

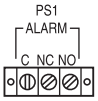


WALL MOUNTING



Additional CONNECTIONS for "R" Option:
Separate Alarm Contacts for each Power Supply

(Note: Connections for 'ALARM' in above drawings become connections for 'PS2 ALARM')



SWITCHING REGULATED

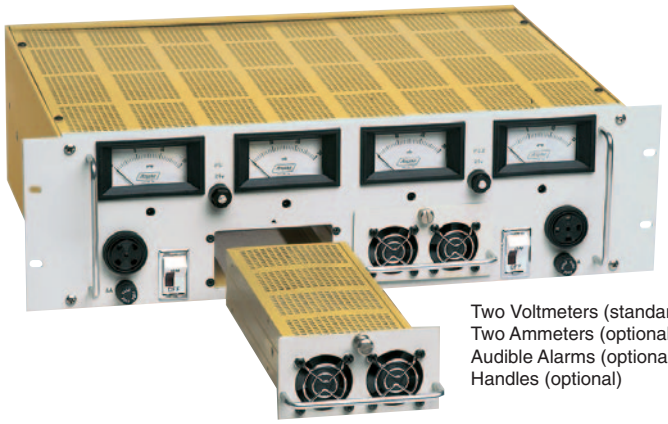
PLUGGABLE REDUNDANT POWER PACKAGES

(Power Factor Correction and Universal Input)

AC-DC

single output

- Shipped Within 9 Days
- Five Year Warranty



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

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.

SPECIFICATIONS

Input Voltage: 90-265 VAC, 49-420 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: 0.99 typical at 115 VAC, 60Hz and full load. Complies with EN61000-3-2.

Drift: ±0.1% typical 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.)

OPTIONS

Add option suffixes in alphabetical order.
Example: R24WP8XAHKS.

Ammeters: One for each output. To order, add suffix letter “A” to model number.

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.

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.

Handles: To order, add suffix “H” to model number.

Chassis Slides: For racks having rear mounting rails spaced 20″ to 26″ behind the front panel. To order, add suffix “S” to model number.

For more Specifications and information, see pages B1 & B2.

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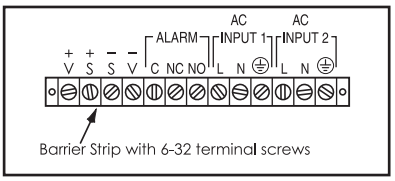
Switching Regulated Pluggable REDUNDANT POWER PACKAGES

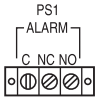
Nominal Output Voltage	Adjust Range ±V	Output Current Amps. at 40°C	55°C	71°C	Ripple mV (@ 25 MHz BW) RMS	P-P	Model	Case Size
3.3	.5	15.4	13	10.7	10	50	R3.3WP8X	5RP13
3.3	.5	24	20.5	16.8	10	50	R3.3WP8	5RP13
5	.5	15.4	13	10.7	10	50	R5WP8X	5RP13
5	.5	24	20.5	16.8	10	50	R5WP8	5RP13
6	.5	15	12.6	10.5	10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

CONNECTIONS:

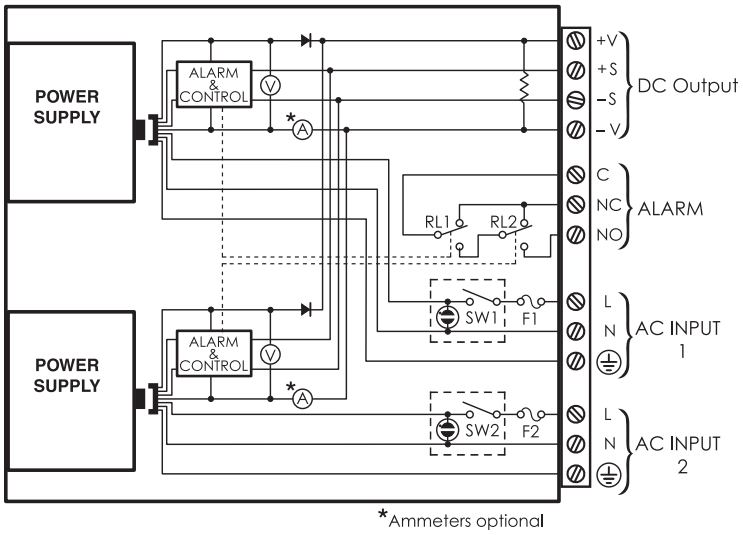


Additional CONNECTIONS for "R" Option:
Separate Alarm Contacts for each Power Supply

(Note: Connections for 'ALARM' in the above drawing become connections for 'PS2 ALARM')



Simplified Diagram for Pluggable Redundant Power Packages



*Ammeters optional

LINEAR REGULATED

MODULAR REDUNDANT SYSTEMS

AC-DC

single output

- Shipped Within 9 Days
- Five Year Warranty

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 B10).

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. 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.

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. 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	Model	Case Sizes: Integration Module	Case Sizes: Power Supplies (2)
5	.5	2.6	2.5	2.4	1	RM5N8X	RM6	CN8H
5	.5	5.3	4.4	3.5	1	RM5M6	RM6	CM6
5	.5	11	9.3	7.5	1	RM5M13	RM6	CM13
5	.5	21	17	14	1	RM5H11	RM6	CH11
12	.5	1.5	1.5	1.5	1	RM12N8X	RM6	CN8H
12	.5	3.5	3	2.5	1	RM12M6	RM6	CM6
12	.5	8	7.5	7	1	RM12M13	RM6	CM13
12	.5	16	13.8	11.2	1	RM12H11	RM6	CH11
12	.5	20	17	14.2	1	RM12H16	RM6	CH16
15	.5	1.5	1.5	1.5	1	RM15N8X	RM6	CN8H
15	.5	4	3.8	3.6	1	RM15M9	RM6	CM9
15	.5	6.5	6	5.5	1	RM15M13	RM6	CM13
15	.5	14.7	12.5	10.3	1	RM15H11	RM6	CH11
15	.5	18.7	16	13.3	1	RM15H16	RM6	CH16
24	.5	.9	.9	.9	1	RM24N8X	RM6	CN8H
24	.5	3	2.7	2.4	1	RM24M9	RM6	CM9
24	.5	5	5	5	1	RM24M13	RM6	CM13
24	.5	11.7	10.2	8.7	1	RM24H11	RM6	CH11
24	.5	14.7	12.7	10.7	1	RM24H16	RM6	CH16
28	.5	1	1	1	1	RM28N8X	RM6	CN8H
28	.5	2.7	2.6	2.5	1	RM28M9	RM6	CM9
28	.5	5	5	5	1	RM28M13	RM6	CM13
28	.5	10.5	9.2	8	1	RM28H11	RM6	CH11
28	.5	14	12	10	1	RM28H16	RM6	CH16
48	.5	.4	.4	.4	1	RM48N8T	RM6	CN8T
48	.5	1.6	1.4	1.2	1	RM48M9	RM6	CM9
48	.5	3	3	3	1	RM48M13	RM6	CM13
48	.5	6	5	4	1	RM48H11	RM6	CH11
48	.5	8.5	7.2	5.5	1	RM48H16	RM6	CH16
60	1	.25	.25	.25	1	RM60N8T	RM6	CN8T
60	1	1	.9	.8	1	RM60M9	RM6	CM9
60	1	2.5	2.1	1.7	1	RM60M13	RM6	CM13
60	1	5	4.1	3.3	1	RM60H11	RM6	CH11
60	1	7	5.8	4.6	1	RM60H16	RM6	CH16
120	1	.12	.12	.12	1	RM120N8T	RM6	CN8T
120	1	.5	.5	.4	1	RM120M6	RM6	CM6
120	1	1.2	1.1	1	1	RM120M13	RM6	CM13
120	1	2.5	2	1.6	1	RM120H11	RM6	CH11
120	1	3.5	2.9	2.3	1	RM120H16	RM6	CH16
125	1	.12	.12	.12	1	RM125N8T	RM6	CN8T
125	1	.4	.4	.4	1	RM125M6	RM6	CM6
125	1	1.2	1.1	1	1	RM125M13	RM6	CM13
125	1	2.4	1.9	1.5	1	RM125H11	RM6	CH11
125	1	3.4	2.8	2.3	1	RM125H16	RM6	CH16

For Specifications and other information, see pages B1 & B2.

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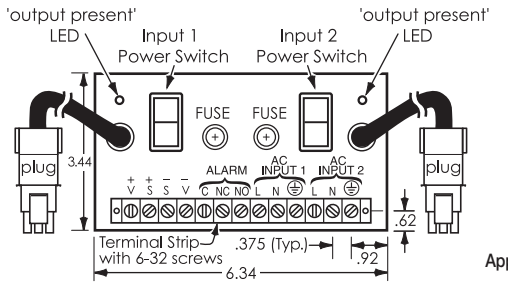
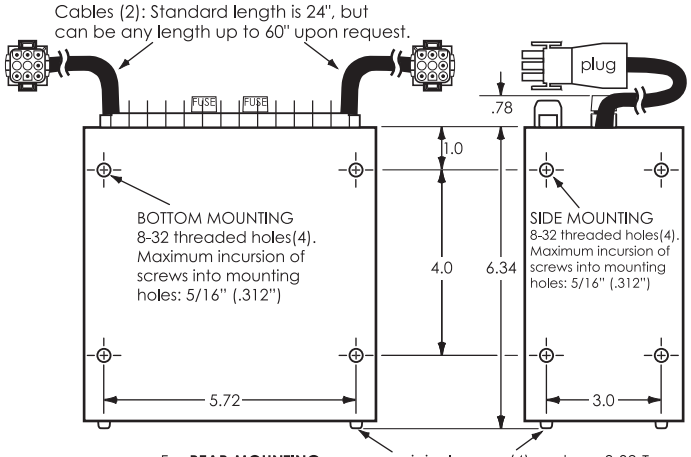
INTEGRATION MODULE



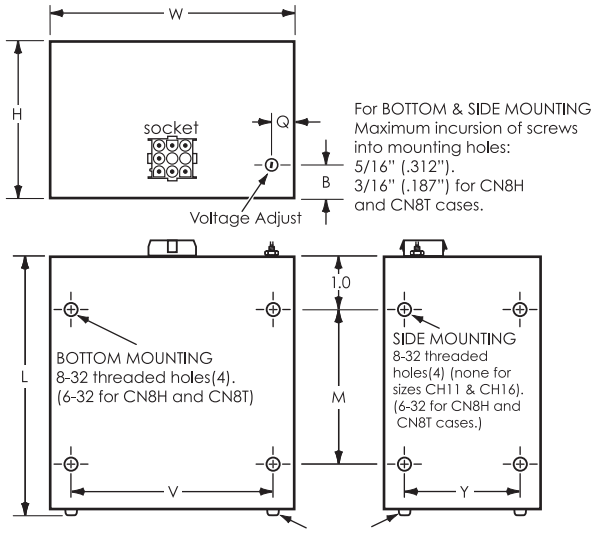
Case Size RM6
Approx. Weight: 2 lb. 8 oz.



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.

All dimensions in inches.

POWER SUPPLIES
(Two per Modular Redundant System)

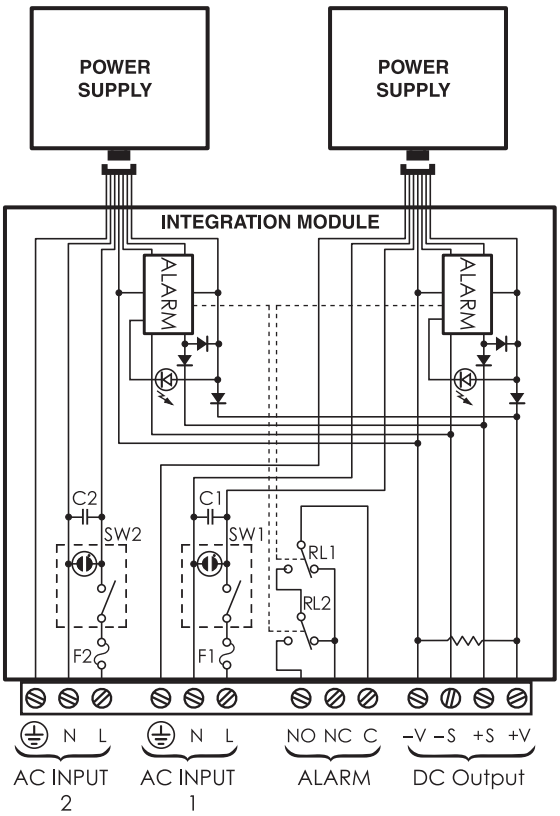


For **REAR MOUNTING**, remove original screws(4) and use 8-32 Type F self-tapping screws. They should extend at least 5/16" (0.312") into the power supply case.
For **REAR MOUNTING of CN8H and CN8T cases**, remove original 6-32 screws(4). These screws may then be used for mounting, provided they extend at least 1/4" (0.250") into the power supply case.

Case Size	L	W	H	M	V	Y	Q	B	Approx. Weight
CM6	6.59	5.12	3.44	4.0	4.5	3.0	.5	.75	4 lb. 4 oz.
CM9	9.25	5.12	3.44	6.0	4.5	3.0	.5	.75	7 lb. 4 oz.
CM13	13.25	5.12	3.44	10.0	4.5	3.0	.5	.75	11 lb.
CH11	11.25	7.37	5.12	8.0	6.75	4.56	1.12	1.25	18 lb. 4 oz.
CH16	16.00	7.37	5.12	11.0	6.75	4.56	1.12	1.25	26 lb.
CN8H	8.47	4.68	1.68	5.0	3.12	1.31	2.87	1.31	3 lb. 14 oz.
CN8T	8.47	3.84	1.68	5.0	3.12	1.31	2.87	1.31	3 lb. 2 oz.

All dimensions in inches.

Simplified Diagram for Modular Redundant Systems



ACCESSORY MOUNTING KITS

FOR WALL MOUNTING (See page H3 for illustration.)
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 case sizes RM6, CM6, CM9, CM13, CH11, CH16:
GB8 Mounting Kit *(#8-32 mounting holes)*
For case size CN8T:
NP6 Mounting Kit *(#6-32 mounting holes)*
For case size CN8H:
NP6L Mounting Kit *(#6-32 mounting holes)*
Model NP6L consists of two brackets 1.5" long and two 2.5" long brackets (to extend beyond heat sink).

FOR DIN RAIL MOUNTING (See page H3 for illustration.)

For Rear Mounting
GR35DIN Mounting Kit:
Fits on case sizes RM6, CM6, CM9.
(Can be used, but not recommended, on case size CM13.)
NPR35DIN Mounting Kit:
Fits on case sizes CN8H, CN8T.

For Horizontal Mounting
CH35DIN Mounting Kit:
Fits on case size RM6.
GH35DIN Mounting Kit:
Fits on case sizes CM6, CM9, CM13.
NPH35DIN Mounting Kit:
Fits on case sizes CN8H, CN8T.

For Vertical Mounting
NPV35DIN Mounting Kit:
Fits on case sizes CN8H, CN8T.

SWITCHING REGULATED

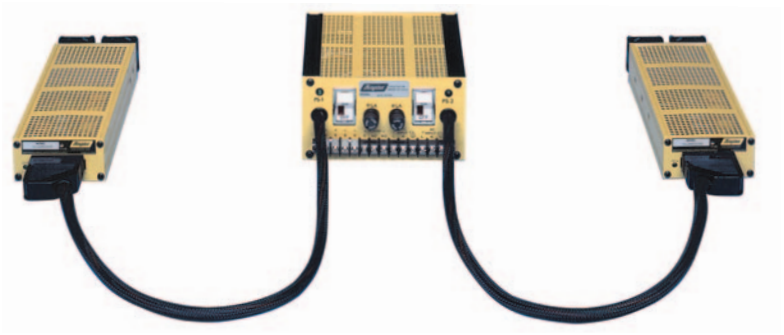
MODULAR REDUNDANT SYSTEMS

(Power Factor Correction and Universal Input)

AC-DC

single output

- Shipped Within 9 Days
- Five Year Warranty



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.

For more Specifications and information, see pages B1 & B2.

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 B12).

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. Replace the "??" with the cable length desired. For example, if you are ordering Model RM24WN8 with 4 foot (48") cables, the model number would be RM24WN8C48.

Simplified Diagram for Modular Redundant Systems:

See page B10

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

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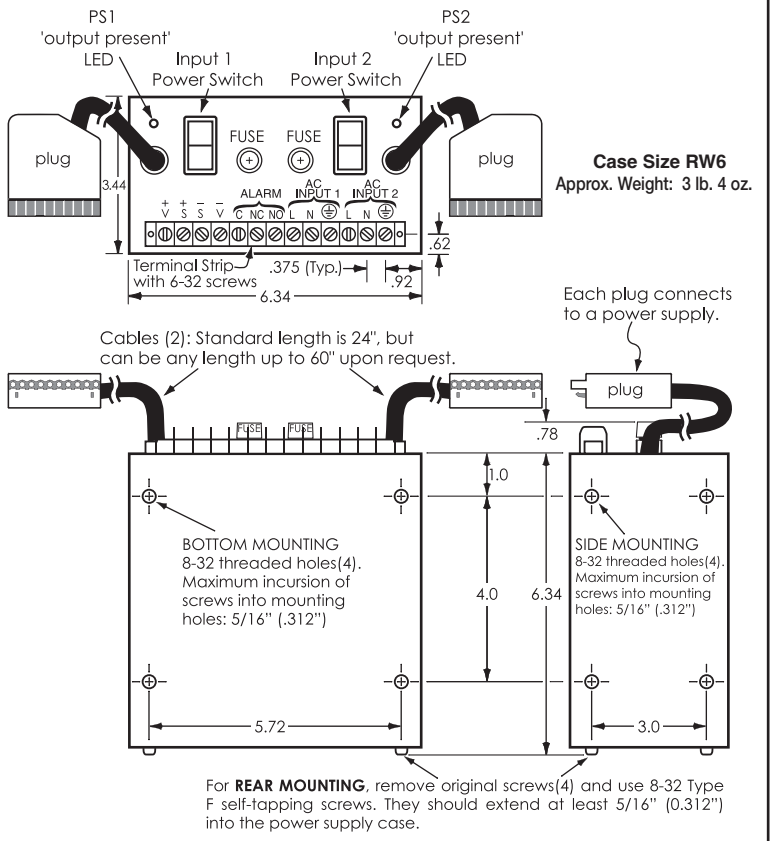
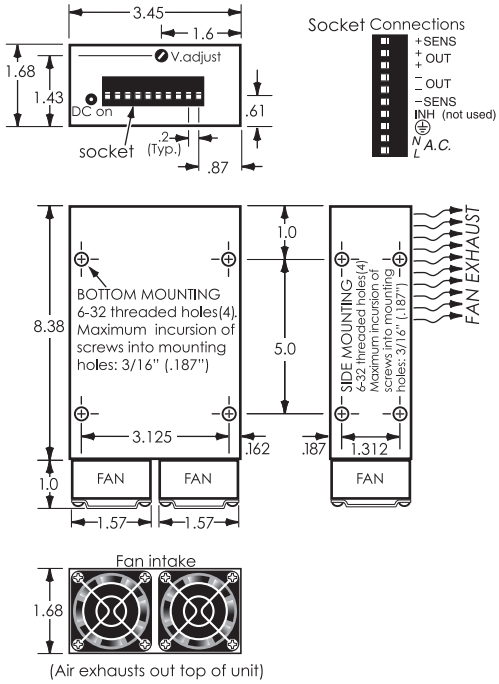
INTEGRATION MODULE



All dimensions in inches.

POWER SUPPLIES

(Two in each Modular Redundant System)



Case Size	Number of fans on rear panel	Approx. Weight
WN8	2	2 lb. 2 oz.
WN8A	1 (centered on rear)	1 lb. 14 oz.

All dimensions in inches.

SPECIFICATIONS

Input Voltage: 90-265 VAC, 49-420 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: 0.99 typical at 115 VAC, 60Hz and full load. Complies with EN61000-3-2.

Drift: ±0.1% typical 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; 300 Vdc.
Output to case; 300 Vdc.

Thermal Protection: Thermostat, self-resetting.

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

ACCESSORY MOUNTING KITS

FOR WALL MOUNTING (See page H3 for illustration.)
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 case size RW6:
GB8 Mounting Kit *(#8-32 mounting holes)*

For case sizes WN8, WN8A:
NP6 Mounting Kit *(#6-32 mounting holes)*

FOR DIN RAIL MOUNTING (See page H3 for illustration.)

For Rear Mounting
GR35DIN Mounting Kit:
Fits on case size RW6.

For Horizontal Mounting
CH35DIN Mounting Kit:
Fits on case size RW6.
NPH35DIN Mounting Kit:
Fits on case sizes WN8, WN8A.

For Vertical Mounting
NPV35DIN Mounting Kit:
Fits on case sizes WN8, WN8A.

single output

Mini Encapsulated - PC Board mounting

SWITCHING REGULATED **- or - with screw terminals**

DC output (accepts either AC or DC input)

- Shipped Within 6 Days
- One Year Warranty

RoHS
COMPLIANT

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 ELW-1 accessory socket shown on page H4. For models with screw terminals, when wall-mounting or DIN rail mounting is desired, use accessory Mounting Kits on page H4.

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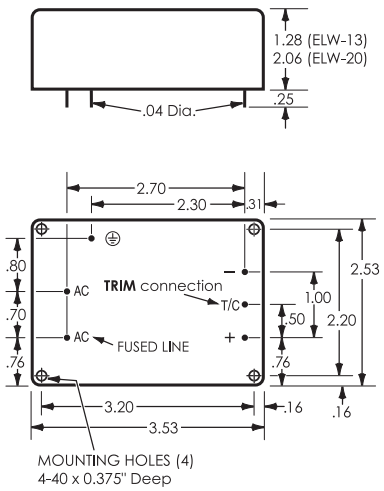
FOR PC BOARD MOUNTING

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

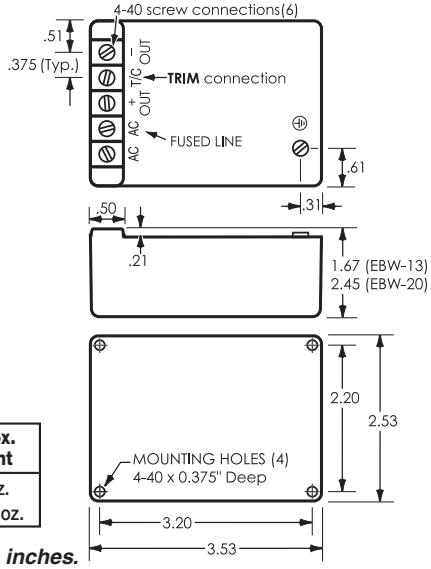


Case Size	Approx. Weight
ELW-13	11 oz.
ELW-20	1 lb. 1 oz.

All dimensions in inches.

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



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

All dimensions in inches.

Narrow Profile

SWITCHING REGULATED (to 120 watts)

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

- Shipped Within 3 Days
- UL60950, UL508, CE Certified
- Five Year Warranty

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

STANDARD FEATURES

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

SPECIFICATIONS

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

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

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

Startup Time: 1 second typical.

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

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

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

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

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

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

Holdup Time: 20 mS minimum.

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

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

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

Overvoltage Protection: Automatic reset.

Output Indicator (DC on): Green LED.

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

Ambient Operating Temperature: 0 to +71°C.

Storage Temperature: –40 to +85°C.

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

Switching Frequency: 100 kHz (Typical).

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

Internal Failure Protection: Provided by internal fuse.

Mounting: Threaded mounting holes permit mounting to a chassis, cabinet wall or bracket. To mount from the power supply side of the mounting surface or for DIN rail mounting, see accessory Mounting Kits on page H3.

OPTIONS

230 Volt Input: For applications where operation on an input of 180-265 VAC, 47-420 Hz, is desired. To order, add suffix "–230" to the model number. On 230 VAC models, 200-375 Vdc input can also be used.

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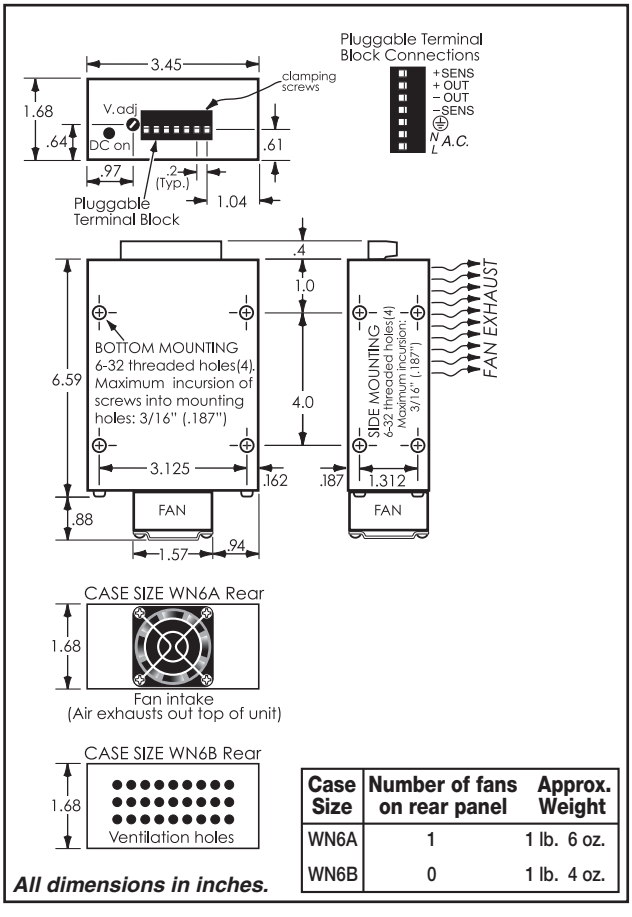
Narrow Profile SWITCHING REGULATED (to 120 watts)

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.) %	Model	Case Size
3.3	.5	12	8.4	10	50	66	W3.3FT1200	WN6B
3.3	.5	15	10.5	10	50	66	W3.3FT1500	WN6A
5	.5	12	8.4	10	50	70	W5FT1200	WN6B
5	.5	15	10.5	10	50	70	W5FT1500	WN6A
6	.5	10	7	10	50	71	W6FT1000	WN6B
6	.5	12.5	8.6	10	50	71	W6FT1250	WN6A
7	.5	8.5	5.9	10	50	71	W7FT850	WN6B
7	.5	10.6	7.4	10	50	71	W7FT1060	WN6A
8	.5	7.5	5.2	15	100	72	W8FT750	WN6B
8	.5	9.4	6.6	15	100	72	W8FT940	WN6A
9	.5	6.6	4.6	15	100	73	W9FT660	WN6B
9	.5	9.3	6.5	15	100	73	W9FT930	WN6A
10	.5	6	4.2	15	100	73	W10FT600	WN6B
10	.5	9.2	6.4	15	100	73	W10FT920	WN6A
12	.5	5.8	4.0	15	100	76	W12FT580	WN6B
12	.5	9.1	6.3	15	100	76	W12FT910	WN6A
13	.5	5.3	3.7	15	100	76	W13FT530	WN6B
13	.5	8.1	5.6	15	100	76	W13FT810	WN6A
14	.5	4.9	3.4	15	100	76	W14FT490	WN6B
14	.5	7.7	5.4	15	100	76	W14FT770	WN6A
15	.5	4.7	3.3	15	100	76	W15FT470	WN6B
15	.5	7.4	5.2	15	100	76	W15FT740	WN6A
16	.5	4.4	3	15	100	76	W16FT440	WN6B
16	.5	6.8	4.7	15	100	76	W16FT680	WN6A
18	.5	4	2.8	15	100	78	W18FT400	WN6B
18	.5	6	4.2	15	100	78	W18FT600	WN6A
20	.5	3.7	2.6	15	100	78	W20FT370	WN6B
20	.5	5.6	3.9	15	100	78	W20FT560	WN6A
22	.5	3.4	2.4	15	100	79	W22FT340	WN6B
22	.5	5.3	3.7	15	100	79	W22FT530	WN6A
24	.5	3.2	2.2	15	100	81	W24FT320	WN6B
24	.5	5	3.5	15	100	80	W24FT500	WN6A
25	.5	3	2.1	15	100	81	W25FT300	WN6B
25	.5	4.8	3.3	15	100	80	W25FT480	WN6A
26	.5	2.8	2	15	100	81	W26FT280	WN6B
26	.5	4.6	3.2	15	100	80	W26FT460	WN6A
28	.5	2.7	1.9	15	100	81	W28FT270	WN6B
28	.5	4.2	2.9	15	100	80	W28FT420	WN6A
30	.5	2.5	1.7	25	150	81	W30FT250	WN6B
30	.5	4	2.8	25	150	80	W30FT400	WN6A
32	1	2.3	1.6	25	150	81	W32FT230	WN6B
32	1	3.7	2.5	25	150	80	W32FT370	WN6A
34	1	2.2	1.5	25	150	81	W34FT220	WN6B
34	1	3.5	2.4	25	150	80	W34FT350	WN6A
36	1	2.1	1.4	25	150	81	W36FT210	WN6B
36	1	3.3	2.3	25	150	80	W36FT330	WN6A
38	1	2	1.4	25	150	81	W38FT200	WN6B
38	1	3.1	2.2	25	150	80	W38FT310	WN6A
40	1	1.9	1.3	25	150	82	W40FT190	WN6B
40	1	3	2.1	25	150	81	W40FT300	WN6A
42	1	1.8	1.2	25	150	82	W42FT180	WN6B
42	1	2.8	1.9	25	150	81	W42FT280	WN6A
45	1	1.7	1.2	25	150	82	W45FT170	WN6B
45	1	2.6	1.8	25	150	81	W45FT260	WN6A
48	1	1.6	1.1	25	150	82	W48FT160	WN6B
48	1	2.5	1.7	25	150	81	W48FT250	WN6A



Case Size	Number of fans on rear panel	Approx. Weight
WN6A	1	1 lb. 6 oz.
WN6B	0	1 lb. 4 oz.

All dimensions in inches.

Narrow Profile

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

DC output (accepts either AC or DC input)

- Shipped Within 3 Days
- UL60950, UL508, CE Certified
- Five Year Warranty

Small yet providing up to 288 watts of well regulated DC, these supplies can be mounted in spaces where many others won't fit. A metal case fully encloses all circuitry and provides EMI shielding and an AC input filter attenuates both common and differential mode noise conducted to the line.

STANDARD FEATURES

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

SPECIFICATIONS

Input Voltage: 90-265 VAC, 49-420 Hz, single phase, or 110-350 Vdc. DC input may be connected without regard to polarity.

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

Startup Time: 800 mS typical.

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

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

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

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

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

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

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

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%.

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

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

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

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

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

Output Indicator (DC on): Green LED.

Thermal Protection: Thermostat, self-resetting.

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

Ambient Operating Temperature: 0 to +71°C.

Storage Temperature: –40 to +85°C.

Cooling: Forced-air cooled; air enters rear of power supply and exits from top.
Case size WN8B: convection cooled.

Switching Frequency: 100 kHz (Typical).

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

Internal Failure Protection: Provided by internal fuse.

Mounting: Threaded mounting holes permit mounting to a chassis, cabinet wall or bracket. To mount from the power supply side of the mounting surface or for DIN rail mounting, see accessory Mounting Kits on page H3.

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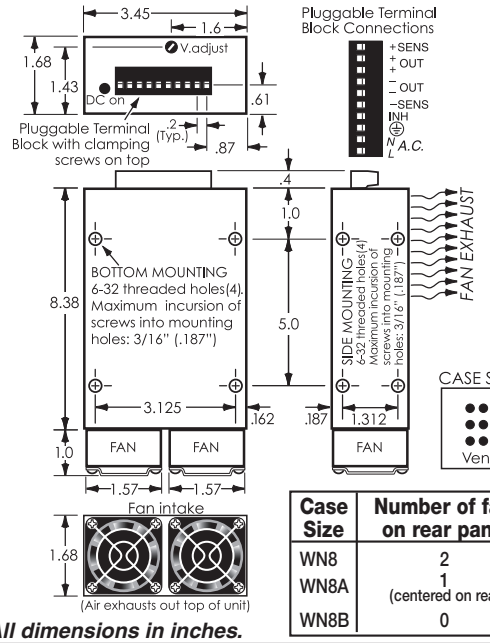
Narrow Profile SWITCHING REGULATED (to 288 watts)

Nominal Output Voltage	Adjust Range ± V	Output Current Amps. at 40°C	71°C	Ripple mV (@ 25 MHz BW) RMS	P-P	Effic. (Typ.) %	Model	Case Size
3.3	.5	12	8.4	10	50	66	W3.3NT1200	WN8B
3.3	.5	18.5	12.9	10	50	66	W3.3NT1850	WN8A
3.3	.5	25	17.5	10	50	66	W3.3NT2500	WN8
5	.5	12	8.4	10	50	69	W5NT1200	WN8B
5	.5	18.5	12.9	10	50	69	W5NT1850	WN8A
5	.5	25	17.5	10	50	69	W5NT2500	WN8
6	.5	10	7	10	50	70	W6NT1000	WN8B
6	.5	15.4	10.7	10	50	70	W6NT1540	WN8A
6	.5	24	16.8	10	50	70	W6NT2400	WN8
7	.5	8.5	5.9	10	50	70	W7NT850	WN8B
7	.5	15	10.5	10	50	70	W7NT1500	WN8A
7	.5	23	16.1	10	50	70	W7NT2300	WN8
8	.5	7.5	5.2	15	100	72	W8NT750	WN8B
8	.5	14.7	10.3	15	100	72	W8NT1470	WN8A
8	.5	23	16.1	15	100	72	W8NT2300	WN8
9	.5	6.6	4.6	15	100	72	W9NT660	WN8B
9	.5	14.4	10	15	100	72	W9NT1440	WN8A
9	.5	23	16.1	15	100	72	W9NT2300	WN8
10	.5	6	4.2	15	100	73	W10NT600	WN8B
10	.5	14.1	9.8	15	100	73	W10NT1410	WN8A
10	.5	22	15.4	15	100	73	W10NT2200	WN8
12	.5	5.8	4	15	100	75	W12NT580	WN8B
12	.5	13.7	9.6	15	100	75	W12NT1370	WN8A
12	.5	22	15.4	15	100	75	W12NT2200	WN8
13	.5	5.3	3.7	15	100	75	W13NT530	WN8B
13	.5	12.3	8.6	15	100	75	W13NT1230	WN8A
13	.5	20	14	15	100	75	W13NT2000	WN8
14	.5	4.9	3.4	15	100	75	W14NT490	WN8B
14	.5	11.7	8.2	15	100	75	W14NT1170	WN8A
14	.5	19	13.3	15	100	75	W14NT1900	WN8
15	.5	4.7	3.3	15	100	75	W15NT470	WN8B
15	.5	11.1	7.8	15	100	75	W15NT1110	WN8A
15	.5	18	12.6	15	100	75	W15NT1800	WN8
16	.5	4.4	3	15	100	75	W16NT440	WN8B
16	.5	10.2	7.1	15	100	75	W16NT1020	WN8A
16	.5	16.5	11.5	15	100	75	W16NT1650	WN8
18	.5	4	2.8	15	100	77	W18NT400	WN8B
18	.5	9.2	6.4	15	100	77	W18NT920	WN8A
18	.5	15	10.5	15	100	77	W18NT1500	WN8
20	.5	3.7	2.6	15	100	78	W20NT370	WN8B
20	.5	8.6	6	15	100	78	W20NT860	WN8A
20	.5	14	9.8	15	100	78	W20NT1400	WN8
22	.5	3.4	2.4	15	100	78	W22NT340	WN8B
22	.5	8	5.6	15	100	78	W22NT800	WN8A
22	.5	13	9.1	15	100	78	W22NT1300	WN8
24	.5	3.2	2.2	15	100	80	W24NT320	WN8B
24	.5	7.5	5.3	15	100	80	W24NT750	WN8A
24	.5	12	8.4	15	100	80	W24NT1200	WN8
25	.5	3	2.1	15	100	80	W25NT300	WN8B
25	.5	7.2	5	15	100	80	W25NT720	WN8A
25	.5	11.2	7.8	15	100	80	W25NT1120	WN8
26	.5	2.8	2	15	100	80	W26NT280	WN8B
26	.5	6.9	4.8	15	100	80	W26NT690	WN8A
26	.5	10.6	7.4	15	100	80	W26NT1060	WN8
28	.5	2.7	1.9	15	100	80	W28NT270	WN8B
28	.5	6.2	4.3	15	100	80	W28NT620	WN8A
28	.5	10	7	15	100	80	W28NT1000	WN8
30	.5	2.4	1.7	25	150	80	W30NT240	WN8B
30	.5	5.6	3.9	25	150	80	W30NT560	WN8A
30	.5	9	6.3	25	150	80	W30NT900	WN8
32	1	2.3	1.6	25	150	80	W32NT230	WN8B
32	1	5.4	3.7	25	150	80	W32NT540	WN8A
32	1	8.6	6	25	150	80	W32NT860	WN8
34	1	2.2	1.5	25	150	80	W34NT220	WN8B
34	1	5.2	3.6	25	150	80	W34NT520	WN8A
34	1	8.3	5.8	25	150	80	W34NT830	WN8
36	1	2.1	1.4	25	150	80	W36NT210	WN8B
36	1	5	3.5	25	150	80	W36NT500	WN8A
36	1	8	5.6	25	150	80	W36NT800	WN8
38	1	2	1.4	25	150	80	W38NT200	WN8B
38	1	4.7	3.3	25	150	80	W38NT470	WN8A
38	1	7.5	5.2	25	150	80	W38NT750	WN8

Nominal Output Voltage	Adjust Range ± V	Output Current Amps. at 40°C	71°C	Ripple mV (@ 25 MHz BW) RMS	P-P	Effic. (Typ.) %	Model	Case Size
40	1	1.9	1.3	25	180	81	W40NT190	WN8B
40	1	4.3	3	25	150	81	W40NT430	WN8A
40	1	7	4.9	25	150	81	W40NT700	WN8
42	1	1.8	1.2	25	150	81	W42NT180	WN8B
42	1	4.1	2.8	25	150	81	W42NT410	WN8A
42	1	6.8	4.7	25	150	81	W42NT680	WN8
45	1	1.7	1.2	25	150	81	W45NT170	WN8B
45	1	3.9	2.7	25	150	81	W45NT390	WN8A
45	1	6.4	4.4	25	150	81	W45NT640	WN8
48	1	1.6	1.1	25	150	81	W48NT160	WN8B
48	1	3.7	2.6	25	150	81	W48NT370	WN8A
48	1	6	4.2	25	150	81	W48NT600	WN8
50	1	1.5	1	50	150	80	W50NT150	WN8B
50	1	3.3	2.3	50	150	80	W50NT330	WN8A
50	1	5	3.5	50	150	80	W50NT500	WN8
55	1	1.3	0.91	50	150	80	W55NT130	WN8B
55	1	3	2.1	50	150	80	W55NT300	WN8A
55	1	4.5	3.2	50	150	80	W55NT450	WN8
60	1	1.2	0.84	50	150	80	W60NT120	WN8B
60	1	2.8	1.9	50	150	80	W60NT280	WN8A
60	1	4.2	2.9	50	150	80	W60NT420	WN8
70	1	1	0.7	67	200	80	W70NT100	WN8B
70	1	2.4	1.7	67	200	80	W70NT240	WN8A
70	1	3.6	2.5	67	200	80	W70NT360	WN8
75	1	1	0.7	67	200	80	W75NT100	WN8B
75	1	2.2	1.5	67	200	80	W75NT220	WN8A
75	1	3.3	2.3	67	200	80	W75NT330	WN8
80	1	0.9	0.63	67	200	80	W80NT90	WN8B
80	1	2.1	1.4	67	200	80	W80NT210	WN8A
80	1	3.1	2.2	67	200	80	W80NT310	WN8
90	1	0.8	0.55	100	300	80	W90NT80	WN8B
90	1	1.8	1.3	100	300	80	W90NT180	WN8A
90	1	2.8	1.9	100	300	80	W90NT280	WN8
100	1	0.75	0.52	150	450	80	W100NT75	WN8B
100	1	1.7	1.2	150	450	80	W100NT170	WN8A
100	1	2.5	1.8	150	450	80	W100NT250	WN8
110	1	0.65	0.45	150	450	80	W110NT65	WN8B
110	1	1.5	1.1	150	450	80	W110NT150	WN8A
110	1	2.3	1.6	150	450	80	W110NT230	WN8
120	1	0.6	0.42	150	450	80	W120NT60	WN8B
120	1	1.4	1	150	450	80	W120NT140	WN8A
120	1	2.1	1.5	150	450	80	W120NT210	WN8
125	1	0.6	0.42	150	450	80	W125NT60	WN8B
125	1	1.3	0.9	150	450	80	W125NT130	WN8A
125	1	2	1.4	150	450	80	W125NT200	WN8



Case Size	Number of fans on rear panel	Approx. Weight
WN8	2	2 lb. 2 oz.
WN8A	1 (centered on rear)	1 lb. 14 oz.
WN8B	0	1 lb. 11 oz.

All dimensions in inches.

Low Profile
SWITCHING REGULATED (to 720 watts)
(Power Factor Correction and Universal Input)

AC-DC or DC-DC
single output & wide adjust output

- Shipped Within 6 Days
- UL60950, UL508, CE Certified
- Five Year Warranty

c UL us / CE / RoHS COMPLIANT / c UL us LISTED

STANDARD FEATURES

- Universal input
- Power Factor Correction
- Constant voltage and constant current modes
- Voltage and current monitor terminals
- Voltage and current programming capabilities
- Short circuit and overload protection
- Thermal protection
- Low Profile
- No minimum load required
- Adjustable down to 0 volts ('Wide Adjust' models)
- Can be paralleled for increased current (option P)
- N+1 Redundancy (option N)
- Internal EMI Filter and RFI Shielding
- Pluggable connectors for input and control wiring
- Remote Sensing
- 'V ok' signal monitor
- 'Soft start' operation

SPECIFICATIONS

WARNING: HIGH LEAKAGE CURRENT. EARTH CONNECTION ESSENTIAL BEFORE CONNECTING SUPPLY.

Input Voltage: 90-265 VAC, 49-420 Hz, single phase, or 110-350 Vdc. 208 VAC 3-phase is also available (see Options).
AC input (maximum): 8A (WL7 case), 12A (WL9 case)
DC input (maximum): 5.75A (WL7 case), 8.8A (WL9 case)
DC input may be connected without regard to polarity.

Inrush current: Cold start, (thermistor limiter) 33A peak @115 VAC (typical); 65A peak @ 230 VAC (typical). (Not recommended for use on ground fault protected circuits.)

Startup Time: 800 ms (typical).

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

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

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

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

Regulation, Ripple (in 'N+1' or 'P' mode):
Line Regulation: ±0.1% or 50 mV, whichever is greater.
Load Regulation: ±0.1% or 50 mV, whichever is greater.
Ripple: 2x rating in table.

Ambient Operating Temperature: 0 to +71°C.

Temperature Coefficient (after 30 minute warm-up):
Voltage mode; ±0.02%/°C (typical).
Current mode; ±0.1%/°C (typical).

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

Storage Temperature: –40 to +85°C.

Holdup Time: 20 ms minimum with full load.

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

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

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

Remote Sensing: Compensates up to 0.5 Vdc drop per output line (or within the limits of the output voltage adjustment range). (Wide Adjust models compensate up to 0.5 Vdc drop per output line.)

Output Adjustment: Voltage and current output adjustments are located on the front. Output adjustment may also be controlled by using remotely located potentiometers.

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

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

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

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

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

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

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

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

Internal Failure Protection: Provided by internal fuse.

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

V ok (Single Output Models): When the power supply's output voltage is between -14% ±2% of the minimum rated output voltage and +15% ±2% of the maximum rated output voltage, 'V ok' will be between +3 and +5 Vdc (high). When the output voltage is outside the -14%, +15% window, the 'V ok' voltage will go low (approx 0.5 Vdc). 'V ok' can source 1 mA or sink up to 5 mA.

Output Indicator (DC on): Green LED.

Switching Frequency: 110 kHz (typical).

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

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

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

Mounting: Threaded mounting holes permit mounting to a chassis, cabinet wall or bracket. To mount from the power supply side of the mounting surface use Mounting Kit NP6, or for DIN rail mounting use Mounting Kit WL35DIN or WLH35DIN. See accessory Mounting Kits on page H3.

OPTIONS

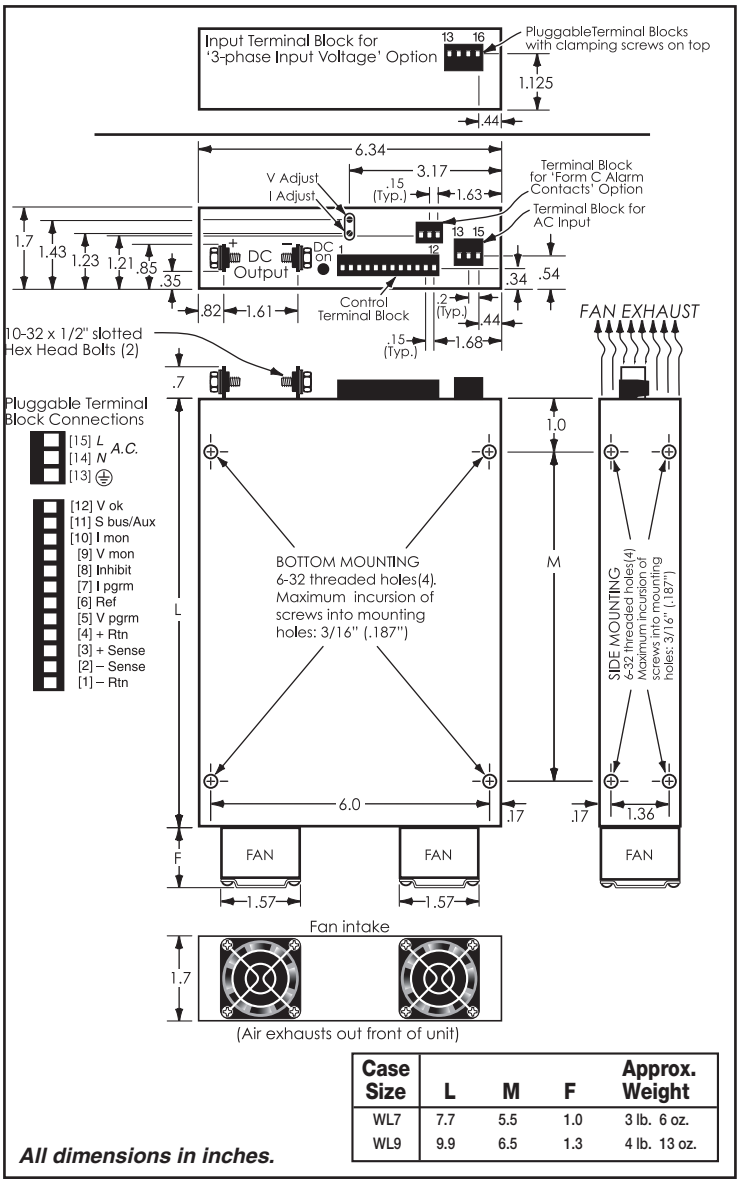
Output Enable: To enable the DC output, the Inhibit terminal must be tied to the -DC output. An open collector or contact closure can be used. To order, add suffix "E" to the model number.

N+1 Redundancy (Single Output Models): Allows up to 4 like models to be wired in N+1 redundancy. An internal isolation OR-ing diode is included in each power supply. Current share accuracy is ±5% (typical). Power supply output current must be derated by 10%. This option includes the "P" (**Parallelable**) option and the "E1" (**Output Blocking Protection Diode**) option listed below, so if you specify the "N" option do not also specify the "P" or "E1" options. To order, add suffix "N" to the model number.

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

Output Blocking Protection Diode: Used for battery charging applications. Derate output by 10%. This option is included in the "N" (**N+1 Redundancy**) option listed above, so if you specify the "N" option, do not also specify the "E1" option. To order, add suffix "E1" to the model number.

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



Case Size	L	M	F	Approx. Weight
WL7	7.7	5.5	1.0	3 lb. 6 oz.
WL9	9.9	6.5	1.3	4 lb. 13 oz.

All dimensions in inches.

Thermostatically Controlled Fan: Fan runs at reduced speed until maximum speed is required. To order, add suffix "D2" to the model number.

208 VAC 3-phase Input Voltage: 170-240 VAC, 60-400 Hz. To order, add suffix "L4" to the model number. (Not available with G7 option.)

15Vdc Auxiliary Voltage: +15Vdc ±2% at 100mA. This option is not available with options "N" or "P". To order, add suffix "H5" to the model number.

Alarm with Relay Contacts (Single Output Models): Form C alarm contacts (contacts rated at 175VDC/peak VAC, 0.5A, 10W max) that change state when output reaches 14% below or 15% above nominal voltage. To order, add suffix "G7" to the model number. (Not available with L4 option; 'V ok' signal is disabled with this option.)

Moisture/Fungus Proofing: Power supplies can be furnished with a moisture and fungus resistant varnish. To order, add suffix "F" to the model number.

Low Profile SWITCHING REGULATED (to 720 watts)

SINGLE OUTPUT

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.) %	Model	Case Size
3.3	.25	40	30	15	50	61	W3.3LT4000	WL7
3.3	.25	70	49	15	50	61	W3.3LT7000	WL9
5	.25	40	30	15	50	64	W5LT4000	WL7
5	.25	70	49	15	50	64	W5LT7000	WL9
6	.25	40	30	15	50	65	W6LT4000	WL7
6	.25	68	47.6	15	50	65	W6LT6800	WL9
7	.5	40	29	15	50	65	W7LT4000	WL7
7	.5	66	46.2	15	50	65	W7LT6600	WL9
8	.5	39	28	30	100	67	W8LT3900	WL7
8	.5	64	44.8	30	100	67	W8LT6400	WL9
9	.5	38.8	27.2	30	100	67	W9LT3880	WL7
9	.5	62	43.4	30	100	67	W9LT6200	WL9
10	.5	37.5	26.3	30	100	68	W10LT3750	WL7
10	.5	60	42	30	100	68	W10LT6000	WL9
12	1	37.5	26.3	30	100	73	W12LT3750	WL7
12	1	60	42	30	100	73	W12LT6000	WL9
13	1	34.6	24.2	30	100	73	W13LT3460	WL7
13	1	55.4	38.8	30	100	73	W13LT5540	WL9
14	1	32.1	22.5	30	100	73	W14LT3210	WL7
14	1	51.4	35.9	30	100	73	W14LT5140	WL9
15	1	30	21	30	100	73	W15LT3000	WL7
15	1	48	33.6	30	100	73	W15LT4800	WL9
16	1	28.1	19.7	30	100	73	W16LT2810	WL7
16	1	45	31.5	30	100	73	W16LT4500	WL9
18	1	25	17.5	30	100	75	W18LT2500	WL7
18	1	40	28	30	100	75	W18LT4000	WL9
20	1	22.5	15.8	30	100	76	W20LT2250	WL7
20	1	36	25.2	30	100	76	W20LT3600	WL9
22	1	20.5	14.4	30	100	76	W22LT2050	WL7
22	1	32.7	22.9	30	100	76	W22LT3270	WL9
24	1	18.8	13.2	30	100	78	W24LT1880	WL7
24	1	30	21	30	100	78	W24LT3000	WL9
25	1	18	12.6	30	100	78	W25LT1800	WL7
25	1	28.8	20.2	30	100	78	W25LT2880	WL9
26	1	17.3	12.1	30	100	78	W26LT1730	WL7
26	1	27.7	19.4	30	100	78	W26LT2770	WL9
28	1	16	11.2	30	100	78	W28LT1600	WL7
28	1	25.7	18	30	100	78	W28LT2570	WL9
30	1	15	10.5	45	150	78	W30LT1500	WL7
30	1	24	16.8	45	150	78	W30LT2400	WL9
32	1	14	9.8	45	150	78	W32LT1400	WL7
32	1	22.5	15.8	45	150	78	W32LT2250	WL9
34	1	13.2	9.3	45	150	78	W34LT1320	WL7
34	1	21.2	14.8	45	150	78	W34LT2120	WL9
36	1	12.5	8.8	45	150	78	W36LT1250	WL7
36	1	20	14	45	150	78	W36LT2000	WL9
38	1	11.8	8.3	45	150	78	W38LT1180	WL7
38	1	18.9	13.2	45	150	78	W38LT1890	WL9
40	1	11.3	7.9	45	150	79	W40LT1130	WL7
40	1	18	12.6	45	150	79	W40LT1800	WL9
42	1	10.7	7.5	45	150	79	W42LT1070	WL7
42	1	17.1	12	45	150	79	W42LT1710	WL9
45	1	10	7	45	150	79	W45LT1000	WL7
45	1	16	11.2	45	150	79	W45LT1600	WL9
48	1	9.4	6.6	45	150	79	W48LT940	WL7
48	1	15	10.5	45	150	79	W48LT1500	WL9
50	1	9	6.3	44	150	79	W50LT900	WL7
50	1	14.4	10	44	150	79	W50LT1440	WL9
55	1	8.2	5.7	44	150	79	W55LT820	WL7
55	1	13.1	9.2	44	150	79	W55LT1310	WL9
60	1	7.5	5.3	44	150	79	W60LT750	WL7
60	1	12	8.4	44	150	79	W60LT1200	WL9
70	1	6.4	4.5	66	225	79	W70LT640	WL7
70	1	10.3	7.2	66	225	79	W70LT1030	WL9
75	1	6	4.2	66	225	79	W75LT600	WL7
75	1	9.6	6.7	66	225	79	W75LT960	WL9
80	1	5.6	3.9	66	225	79	W80LT560	WL7
80	1	9	6.3	66	225	79	W80LT900	WL9
90	1	5	3.5	66	225	79	W90LT500	WL7
90	1	8	5.6	66	225	79	W90LT800	WL9
100	1	4.5	3.2	88	300	79	W100LT450	WL7
100	1	7.2	5	88	300	79	W100LT720	WL9
110	1	4.1	2.9	88	300	79	W110LT410	WL7
110	1	6.5	4.5	88	300	79	W110LT650	WL9
120	1	3.8	2.7	88	300	79	W120LT380	WL7
120	1	6	4.2	88	300	79	W120LT600	WL9
125	1	3.6	2.5	88	300	79	W125LT360	WL7
125	1	5.7	4	88	300	79	W125LT570	WL9
135	1	3.3	2.3	103	350	79	W135LT330	WL7
135	1	5.3	3.7	103	350	79	W135LT530	WL9

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Low Profile SWITCHING REGULATED (to 720 watts)

WIDE ADJUST OUTPUT

Output Voltage Range	Output Current Amps. at		Ripple mV (@ 25 MHz BW)		Effic. (Typ.) %*	Model	Case Size
	40°C	71°C	RMS	P-P			
0-5	40	31	15	50	64	Y05LX4000	WL7
0-5	70	49	15	50	64	Y05LX7000	WL9
0-8	40	28	30	100	67	Y08LX4000	WL7
0-8	64	44	30	100	67	Y08LX6400	WL9
0-9	38	27	30	100	67	Y09LX3800	WL7
0-9	62	43	30	100	67	Y09LX6200	WL9
0-10	37	26	30	100	68	Y010LX3700	WL7
0-10	60	42	30	100	68	Y010LX6000	WL9
0-12	37	26	30	100	68	Y012LX3700	WL7
0-12	60	42	30	100	68	Y012LX6000	WL9
0-14	32	22	30	100	70	Y014LX3200	WL7
0-14	51	35	30	100	70	Y014LX5100	WL9
0-15	30	21	30	100	70	Y015LX3000	WL7
0-15	48	34	30	100	70	Y015LX4800	WL9
0-16	28	20	30	100	70	Y016LX2800	WL7
0-16	45	31	30	100	70	Y016LX4500	WL9
0-18	25	18	30	100	71	Y018LX2500	WL7
0-18	40	28	30	100	71	Y018LX4000	WL9
0-22	20	14	30	100	73	Y022LX2000	WL7
0-22	32	22	30	100	73	Y022LX3200	WL9
0-24	18	13	30	100	73	Y024LX1800	WL7
0-24	30	21	30	100	73	Y024LX3000	WL9
0-25	18	13	30	100	73	Y025LX1800	WL7
0-25	28.8	20	30	100	73	Y025LX2880	WL9
0-30	15	11	45	150	75	Y030LX1500	WL7
0-30	24	16	45	150	75	Y030LX2400	WL9
0-35	12.8	9	45	150	75	Y035LX1280	WL7
0-35	20.5	14	45	150	75	Y035LX2050	WL9
0-36	12	8	45	150	75	Y036LX1200	WL7
0-36	20	14	45	150	75	Y036LX2000	WL9
0-40	11	8	45	150	76	Y040LX1100	WL7
0-40	18	12	45	150	76	Y040LX1800	WL9
0-50	9	6	45	150	76	Y050LX900	WL7
0-50	15	10	45	150	76	Y050LX1500	WL9
0-60	7.5	5.3	45	150	79	Y060LX750	WL7
0-60	12	8.4	45	150	79	Y060LX1200	WL9
0-70	6.4	4.5	66	225	79	Y070LX640	WL7
0-70	10.3	7.2	66	225	79	Y070LX1030	WL9
0-75	6	4.2	66	225	79	Y075LX600	WL7
0-75	9.6	6.7	66	225	79	Y075LX960	WL9
0-80	5.6	3.9	66	225	79	Y080LX560	WL7
0-80	9	6.3	66	225	79	Y080LX900	WL9
0-90	5	3.5	66	225	79	Y090LX500	WL7
0-90	8	5.6	66	225	79	Y090LX800	WL9
0-100	4.5	3.2	88	300	79	Y0100LX450	WL7
0-100	7.2	5	88	300	79	Y0100LX720	WL9
0-110	4.1	2.9	88	300	79	Y0110LX410	WL7
0-110	6.5	4.5	88	300	79	Y0110LX650	WL9
0-120	3.8	2.7	88	300	79	Y0120LX380	WL7
0-120	6	4.2	88	300	79	Y0120LX600	WL9
0-125	3.6	2.5	88	300	79	Y0125LX360	WL7
0-125	5.7	4	88	300	79	Y0125LX570	WL9
0-135	3.3	2.3	103	350	79	Y0135LX330	WL7
0-135	5.3	3.7	103	350	79	Y0135LX530	WL9

Gold Box
SWITCHING REGULATED
AC-DC
single output & wide adjust output

- Shipped Within 9 Days
- U.L. Recognized (3.3v to 48v models)
- Five Year Warranty

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 W12GT95, W15GT78, 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.

Load Regulation:
3.3v to 48v Models: ±0.05%*
50v to 125v Models: ±0.1%

Line Regulation:
3.3v to 48v Models: ±0.05%*
50v to 125v Models: ±0.1%

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% typical 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.

Terminal Strip Cover: Clips on.

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

Switching Frequency: 55 kHz (Typical).

Dielectric Withstand Voltage:
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 H3.

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

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.) %**	Model	Case Size
5-15	23	16	15	100	76	W515MT23	WM6
5-15	36	25	15	100	76	W515MT36	WM9
5-15	54	38	15	100	76	W515GT54	WG7
5-30	13	9	25	150	81	W530MT13	WM6
5-30	19	13	25	150	81	W530MT19	WM9
5-30	30	20	25	150	81	W530GT30	WG7
15-50	8	5	25	150	82	W1550MT8	WM6
15-50	12	8.5	25	150	82	W1550MT12	WM9
15-50	18	12	25	150	82	W1550GT18	WG7

** At maximum output voltage

*or 5 mV, whichever is greater

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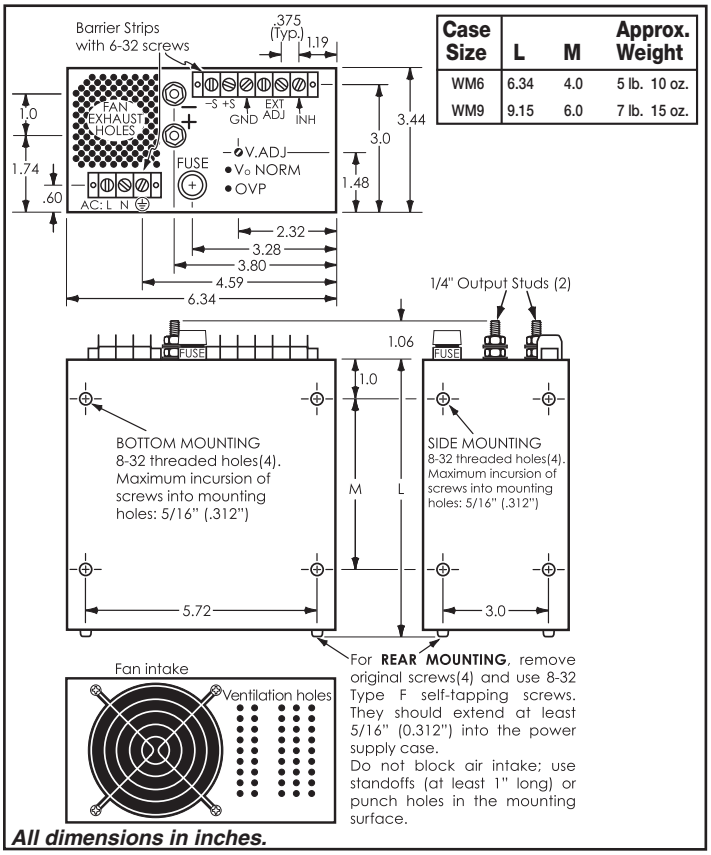
SINGLE OUTPUT MODELS

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.) %	Model	Case Size
3.3	.25	65	45	13	80	65	W3.3MT65	WM6
3.3	.25	100	70	13	80	65	W3.3MT100	WM9
3.3	.25	150	105	13	80	65	W3.3GT150	WG7
5	.25	65	45	13	80	70	W5MT65	WM6
5	.25	100	70	13	80	70	W5MT100	WM9
5	.25	150	105	13	80	70	W5GT150	WG7
6	.25	56	39	13	80	71	W6MT56	WM6
6	.25	86	60	13	80	71	W6MT86	WM9
8	.25	41	28	15	100	73	W8MT41	WM6
8	.25	63	44	15	100	73	W8MT63	WM9
9	.25	37	26	15	100	73	W9MT37	WM6
9	.25	57	40	15	100	73	W9MT57	WM9
10	.5	34	24	15	100	74	W10MT34	WM6
10	.5	52	36	15	100	74	W10MT52	WM9
12	.5	29	20	15	100	76	W12MT29	WM6
12	.5	45	32	15	100	76	W12MT45	WM9
12	.5	68	47	15	100	76	W12GT68	WG7
12	.5	95	66	15	100	76	W12GT95	WG7
15	.5	23	16	15	100	76	W15MT23	WM6
15	.5	36	25	15	100	76	W15MT36	WM9
15	.5	54	38	15	100	76	W15GT54	WG7
15	.5	78	54	15	100	76	W15GT78	WG7
18	.5	20	14	15	100	78	W18MT20	WM6
18	.5	31	22	15	100	78	W18MT31	WM9
20	1	19	13	15	100	79	W20MT19	WM6
20	1	28	19	15	100	79	W20MT28	WM9
24	1	16	11	15	100	81	W24MT16	WM6
24	1	25	18	15	100	81	W24MT25	WM9
24	1	38	26	15	100	81	W24GT38	WG7
24	1	50	35	15	100	81	W24GT50	WG7
28	1	14	10	15	100	81	W28MT14	WM6
28	1	21	15	15	100	81	W28MT21	WM9
28	1	32	22	15	100	81	W28GT32	WG7
28	1	42	29	15	100	81	W28GT42	WG7
30	1	13	9	25	150	81	W30MT13	WM6
30	1	19	13	25	150	81	W30MT19	WM9
36	1	10	7	25	150	81	W36MT10	WM6
36	1	15	11	25	150	81	W36MT15	WM9

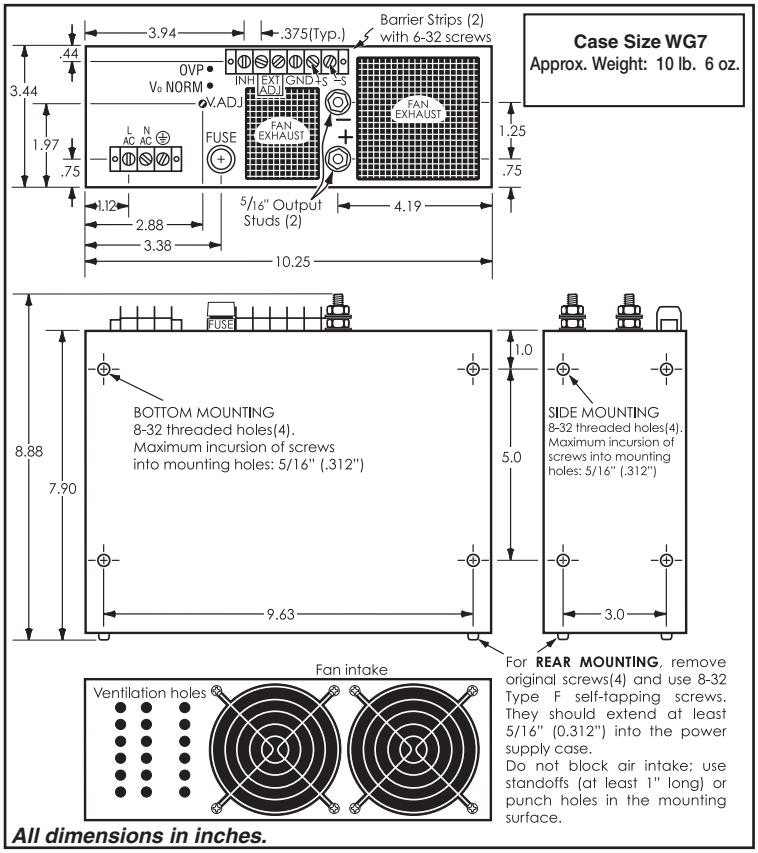
Nominal Output Voltage	Adjust Range ± V	Output Current Amps. at 40°C	Output Current Amps. at 71°C	Ripple mV (@ 25 MHz BW) RMS	Ripple mV (@ 25 MHz BW) P-P	Effic. (Typ.) %	Model	Case Size
40	1	9	6	25	150	82	W40MT9	WM6
40	1	14	10	25	150	82	W40MT14	WM9
48	1	8	5	25	150	82	W48MT8	WM6
48	1	12	8.5	25	150	82	W48MT12	WM9
48	1	19	13	25	150	82	W48GT19	WG7
48	1	25	17	25	150	82	W48GT25	WG7
50*	1	7.7	5.4	50	150	80	W50MT7.7	WM6
50*	1	12	8.4	50	150	80	W50MT12	WM9
50*	1	18.2	12.8	50	150	80	W50GT18.2	WG7
55*	1	7	4.9	50	150	80	W55MT7	WM6
55*	1	10.9	7.6	50	150	80	W55MT10.9	WM9
55*	1	16.6	11.6	50	150	80	W55GT16.6	WG7
60*	1	6.4	4.5	50	150	80	W60MT6.4	WM6
60*	1	10	7.0	50	150	80	W60MT10	WM9
60*	1	15.2	10.6	50	150	80	W60GT15.2	WG7
70*	1	5.5	3.8	67	250	80	W70MT5.5	WM6
70*	1	8.6	6	67	250	80	W70MT8.6	WM9
70*	1	13	9.1	67	250	80	W70GT13	WG7
75*	1	5.1	3.6	67	250	80	W75MT5.1	WM6
75*	1	8	5.6	67	250	80	W75MT8	WM9
75*	1	12.2	8.5	67	250	80	W75GT12.2	WG7
80*	1	4.8	3.4	67	250	80	W80MT4.8	WM6
80*	1	7.5	5.3	67	250	80	W80MT7.5	WM9
80*	1	11.4	8	67	250	80	W80GT11.4	WG7
90*	1	4.3	3	100	250	80	W90MT4.3	WM6
90*	1	6.7	4.7	100	250	80	W90MT6.7	WM9
90*	1	10.1	7.1	100	250	80	W90GT10.1	WG7
100*	2	3.8	2.7	150	350	80	W100MT3.8	WM6
100*	2	6	4.2	150	350	80	W100MT6	WM9
100*	2	9.1	6.4	150	350	80	W100GT9.1	WG7
110*	2	3.5	2.4	150	350	80	W110MT3.5	WM6
110*	2	5.5	3.8	150	350	80	W110MT5.5	WM9
110*	2	8.3	5.8	150	350	80	W110GT8.3	WG7
120*	2	3.2	2.2	150	350	80	W120MT3.2	WM6
120*	2	5	3.5	150	350	80	W120MT5	WM9
120*	2	7.6	5.3	150	350	80	W120GT7.6	WG7
125*	2	3.1	2.2	150	350	80	W125MT3.1	WM6
125*	2	4.8	3.4	150	350	80	W125MT4.8	WM9
125*	2	7.3	5.1	150	350	80	W125GT7.3	WG7

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



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

All dimensions in inches.



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

All dimensions in inches.

SWITCHING REGULATED AC–DC

single output & wide adjust output
with optional auxiliary output (to 180 watts)

1U SWITCHING REGULATED (to 720 watts) (Power Factor Correction and Universal Input)

RACK MOUNTING & BENCHTOP
AC-DC

- UL60950, UL508, CE Certified
- Five Year Warranty

STANDARD FEATURES

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

SPECIFICATIONS

WARNING: HIGH LEAKAGE CURRENT. EARTH CONNECTION ESSENTIAL BEFORE CONNECTING SUPPLY.

Input Voltage: 95-265 VAC, 49-420 Hz, single phase.
AC Input, max.: 8A (450W), 12A (720W)
Note: All units are shipped with 125v IEC line cord (standard).

Inrush current: Cold start, (thermistor limiter) 33A peak @115 VAC (typical); 65A peak @ 230 VAC (typical). (Not recommended for use on ground fault protected circuits.)

Startup Time: 800 mS (typical).

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

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

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

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

Regulation, Ripple (in 'N+1' or 'P' mode):
Line Regulation: ±0.1% or 50 mV, whichever is greater.
Load Regulation: ±0.1% or 50 mV, whichever is greater.
Ripple: 2x rating in table.

Ambient Operating Temperature: 0 to +71°C.

Temperature Coefficient (after 30 minute warm-up):
Voltage mode; ±0.02%/°C (typical).
Current mode; ±0.1%/°C (typical).

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

Storage Temperature: –40 to +85°C.

Holdup Time: 20mS minimum with full load.

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

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

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

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

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

Output Programming (Wide Adjust models): The output voltage and current may be programmed from 0 to full rating by means of control voltage inputs of 0 to +10Vdc (0 to +5Vdc for models with option "C5"). Voltage mode accuracy: 0.5%. Current mode accuracy: 3% for models with greater than 10 amps output current and 4% for models with less than 10 amps output current. Accuracy percentages do not apply below 5% of output rating. ***NOTE: If "C1" and "DIO" options are both present, rear panel output programming is disabled.***

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

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

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1U SWITCHING REGULATED (to 720 watts)

SPECIFICATIONS (continued)

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

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

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

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

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

Internal Failure Protection: Provided by internal fuse.

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

V ok (Single Output models): When the power supply's output voltage is between -14% ±2% of the minimum rated output voltage and +15% ±2% of the maximum rated output voltage, 'V ok' will be between +3 and +5 Vdc (high). When the output voltage is outside the -14%, +15% window, the 'V ok' voltage will go low (approx 0.5 Vdc). 'V ok' can source 1 mA or sink up to 5 mA.

Switching Frequency: 110 kHz (typical).

EMI: Designed to meet FCC Part 15, EN61326-1 and EN55022, Class A.

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

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

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

OPTIONS

Output Enable: To enable the DC output, the Inhibit terminal must be tied to the -DC output. An open collector or contact closure can be used. To order, add suffix "E" to the model number.

Handles: To order, add suffix "H" to the model number.

Digital Voltage and Current Meters: To order, add suffix "M3" to the model number.

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

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

Output Indicator(s) (DC on) (Single Output models): Front panel mounted green LED(s). To order, add suffix "G3" to the model number.

N+1 Redundancy (Single Output models): Allows up to 4 like models to be wired in N+1 redundancy. An internal isolation OR-ing diode is included in each power supply. Current share accuracy is ±5% (typical). Power supply output current must be derated by 10%. This option incorporates the "P" (**Parallelable**) option and the "E1" (**Output Blocking Protection Diode**) option, so if you specify the "N" option do not also specify the "P" or "E1" options. To order, add suffix "N" to the model number.

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

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

Alarm with Relay Contacts (Single Output models): Form C alarm contacts that change state when output voltage deviates ±2Vdc (5v to 47v models) or ±3Vdc (48v to 135v models) from nominal. To order, add suffix "G1" to model number. (Not available with Auxiliary Output or DIO options.)

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

Auxiliary Output: Choose desired voltage from the 'Optional Auxiliary Output' table on page C19. To order, use the 'Model' column to determine suffix. (Not available with C1 or G1 options.)

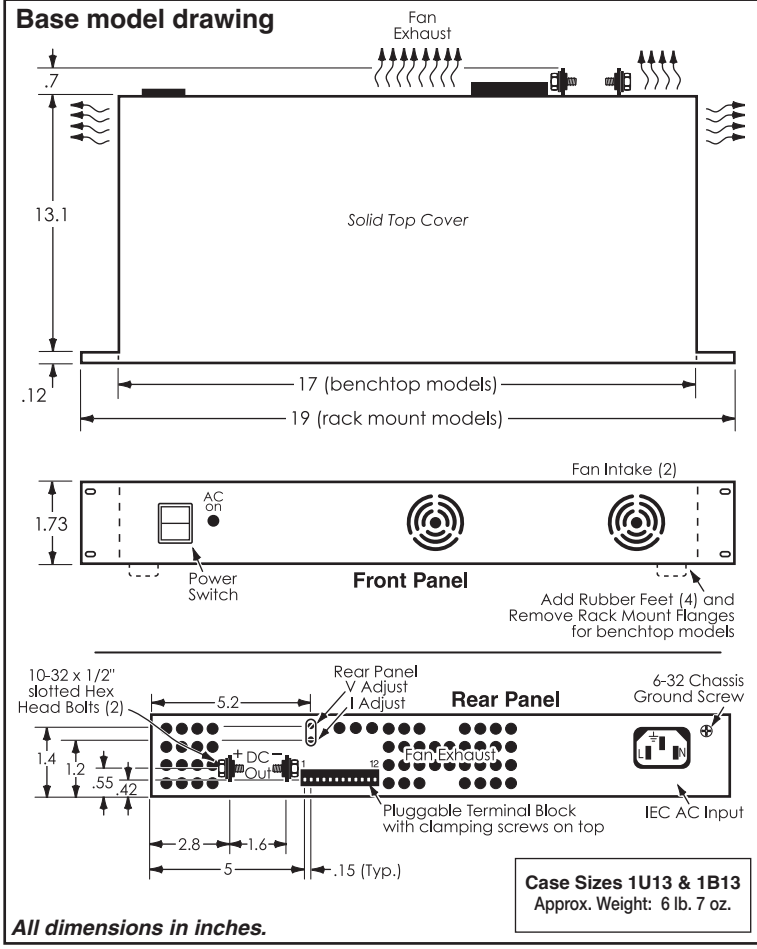
Digital Interface: Can be used to monitor and/or control output voltage and current. Includes isolated Ethernet (10/100Mbps), RS232, and USB interfaces (plus RS485 with option "DIO2"), utilizing 16 bit DAC and ADC. This option incorporates the "E" (**Enable**) option, so if you specify this option do not also specify the "E" option. To order, add either suffix "DIO1" or suffix "DIO2" to model number. (Not available with G1 or Auxiliary Output options.)

Bus Bar Cover: Protects exposed output terminals from contact. To order, add suffix "M" to model number.

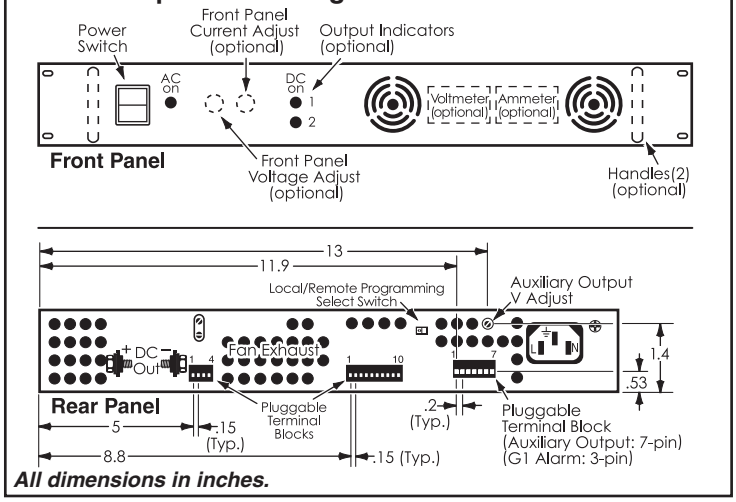
Moisture/Fungus Proofing: Power supplies can be furnished with a moisture and fungus resistant varnish. To order, add suffix "F" to the model number.

1U SWITCHING REGULATED (to 720 watts)

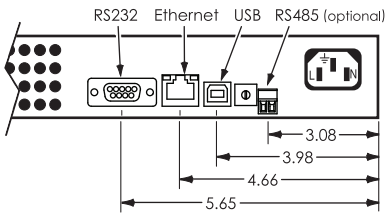
Base model drawing



Available options drawing



Digital Interface option (Rear Panel Detail)



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1U SWITCHING REGULATED (to 720 watts)

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

1U SWITCHING REGULATED (to 720 watts)

SINGLE OUTPUT BENCHTOP 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.) %	Model	Case Size
3.3	.25	40	30	15	50	61	W3.3LTB4000	1B13
3.3	.25	70	49	15	50	61	W3.3LTB7000	1B13
5	.25	40	30	15	50	64	W5LTB4000	1B13
5	.25	70	49	15	50	64	W5LTB7000	1B13
6	.25	40	30	15	50	65	W6LTB4000	1B13
6	.25	68	47.6	15	50	65	W6LTB6800	1B13
7	.5	40	29	15	50	65	W7LTB4000	1B13
7	.5	66	46.2	15	50	65	W7LTB6600	1B13
8	.5	39	28	30	100	67	W8LTB3900	1B13
8	.5	64	44.8	30	100	67	W8LTB6400	1B13
9	.5	38.8	27.2	30	100	67	W9LTB3880	1B13
9	.5	62	43.4	30	100	67	W9LTB6200	1B13
10	.5	37.5	26.3	30	100	68	W10LTB3750	1B13
10	.5	60	42	30	100	68	W10LTB6000	1B13
12	1	37.5	26.3	30	100	73	W12LTB3750	1B13
12	1	60	42	30	100	73	W12LTB6000	1B13
13	1	34.6	24.2	30	100	73	W13LTB3460	1B13
13	1	55.4	38.8	30	100	73	W13LTB5540	1B13
14	1	32.1	22.5	30	100	73	W14LTB3210	1B13
14	1	51.4	35.9	30	100	73	W14LTB5140	1B13
15	1	30	21	30	100	73	W15LTB3000	1B13
15	1	48	33.6	30	100	73	W15LTB4800	1B13
16	1	28.1	19.7	30	100	73	W16LTB2810	1B13
16	1	45	31.5	30	100	73	W16LTB4500	1B13
18	1	25	17.5	30	100	75	W18LTB2500	1B13
18	1	40	28	30	100	75	W18LTB4000	1B13
20	1	22.5	15.8	30	100	76	W20LTB2250	1B13
20	1	36	25.2	30	100	76	W20LTB3600	1B13
22	1	20.5	14.4	30	100	76	W22LTB2050	1B13
22	1	32.7	22.9	30	100	76	W22LTB3270	1B13
24	1	18.8	13.2	30	100	78	W24LTB1880	1B13
24	1	30	21	30	100	78	W24LTB3000	1B13
25	1	18	12.6	30	100	78	W25LTB1800	1B13
25	1	28.8	20.2	30	100	78	W25LTB2880	1B13
26	1	17.3	12.1	30	100	78	W26LTB1730	1B13
26	1	27.7	19.4	30	100	78	W26LTB2770	1B13
28	1	16	11.2	30	100	78	W28LTB1600	1B13
28	1	25.7	18	30	100	78	W28LTB2570	1B13
30	1	15	10.5	45	150	78	W30LTB1500	1B13
30	1	24	16.8	45	150	78	W30LTB2400	1B13
32	1	14	9.8	45	150	78	W32LTB1400	1B13
32	1	22.5	15.8	45	150	78	W32LTB2250	1B13
34	1	13.2	9.3	45	150	78	W34LTB1320	1B13
34	1	21.2	14.8	45	150	78	W34LTB2120	1B13
36	1	12.5	8.8	45	150	78	W36LTB1250	1B13
36	1	20	14	45	150	78	W36LTB2000	1B13
38	1	11.8	8.3	45	150	78	W38LTB1180	1B13
38	1	18.9	13.2	45	150	78	W38LTB1890	1B13
40	1	11.3	7.9	45	150	79	W40LTB1130	1B13
40	1	18	12.6	45	150	79	W40LTB1800	1B13
42	1	10.7	7.5	45	150	79	W42LTB1070	1B13
42	1	17.1	12	45	150	79	W42LTB1710	1B13
45	1	10	7	45	150	79	W45LTB1000	1B13
45	1	16	11.2	45	150	79	W45LTB1600	1B13
48	1	9.4	6.6	45	150	79	W48LTB940	1B13
48	1	15	10.5	45	150	79	W48LTB1500	1B13
50	1	9	6.3	44	150	79	W50LTB900	1B13
50	1	14.4	10	44	150	79	W50LTB1440	1B13
55	1	8.2	5.7	44	150	79	W55LTB820	1B13
55	1	13.1	9.2	44	150	79	W55LTB1310	1B13
60	1	7.5	5.3	44	150	79	W60LTB750	1B13
60	1	12	8.4	44	150	79	W60LTB1200	1B13
70	1	6.4	4.5	66	225	79	W70LTB640	1B13
70	1	10.3	7.2	66	225	79	W70LTB1030	1B13
75	1	6	4.2	66	225	79	W75LTB600	1B13
75	1	9.6	6.7	66	225	79	W75LTB960	1B13
80	1	5.6	3.9	66	225	79	W80LTB560	1B13
80	1	9	6.3	66	225	79	W80LTB900	1B13
90	1	5	3.5	66	225	79	W90LTB500	1B13
90	1	8	5.6	66	225	79	W90LTB800	1B13
100	1	4.5	3.2	88	300	79	W100LTB450	1B13
100	1	7.2	5	88	300	79	W100LTB720	1B13
110	1	4.1	2.9	88	300	79	W110LTB410	1B13
110	1	6.5	4.5	88	300	79	W110LTB650	1B13
120	1	3.8	2.7	88	300	79	W120LTB380	1B13
120	1	6	4.2	88	300	79	W120LTB600	1B13
125	1	3.6	2.5	88	300	79	W125LTB360	1B13
125	1	5.7	4	88	300	79	W125LTB570	1B13
135	1	3.3	2.3	103	350	79	W135LTB330	1B13
135	1	5.3	3.7	103	350	79	W135LTB530	1B13

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1U SWITCHING REGULATED (to 720 watts)

WIDE ADJUST OUTPUT RACK MOUNTING MODELS

Output Voltage Range	Output Current Amps. at 40°C	71°C	Ripple mV (@ 25 MHz BW) RMS	P-P	Effic. (Typ.) %*	Model	Case Size
0-5	40	31	15	50	64	Y05LXU4000	1U13
0-5	70	49	15	50	64	Y05LXU7000	1U13
0-8	40	28	30	100	67	Y08LXU4000	1U13
0-8	64	44	30	100	67	Y08LXU6400	1U13
0-9	38	27	30	100	67	Y09LXU3800	1U13
0-9	62	43	30	100	67	Y09LXU6200	1U13
0-10	37	26	30	100	68	Y010LXU3700	1U13
0-10	60	42	30	100	68	Y010LXU6000	1U13
0-12	37	26	30	100	68	Y012LXU3700	1U13
0-12	60	42	30	100	68	Y012LXU6000	1U13
0-14	32	22	30	100	70	Y014LXU3200	1U13
0-14	51	35	30	100	70	Y014LXU5100	1U13
0-15	30	21	30	100	70	Y015LXU3000	1U13
0-15	48	34	30	100	70	Y015LXU4800	1U13
0-16	28	20	30	100	70	Y016LXU2800	1U13
0-16	45	31	30	100	70	Y016LXU4500	1U13
0-18	25	18	30	100	71	Y018LXU2500	1U13
0-18	40	28	30	100	71	Y018LXU4000	1U13
0-22	20	14	30	100	73	Y022LXU2000	1U13
0-22	32	22	30	100	73	Y022LXU3200	1U13
0-24	18	13	30	100	73	Y024LXU1800	1U13
0-24	30	21	30	100	73	Y024LXU3000	1U13
0-25	18	13	30	100	73	Y025LXU1800	1U13
0-25	28.8	20	30	100	73	Y025LXU2880	1U13
0-30	15	11	45	150	75	Y030LXU1500	1U13
0-30	24	16	45	150	75	Y030LXU2400	1U13
0-35	12.8	9	45	150	75	Y035LXU1280	1U13
0-35	20.5	14	45	150	75	Y035LXU2050	1U13
0-36	12	8	45	150	75	Y036LXU1200	1U13
0-36	20	14	45	150	75	Y036LXU2000	1U13
0-40	11	8	45	150	76	Y040LXU1100	1U13
0-40	18	12	45	150	76	Y040LXU1800	1U13
0-50	9	6	45	150	76	Y050LXU900	1U13
0-50	15	10	45	150	76	Y050LXU1500	1U13
0-60	7.5	5.3	45	150	79	Y060LXU750	1U13
0-60	12	8.4	45	150	79	Y060LXU1200	1U13
0-70	6.4	4.5	66	225	79	Y070LXU640	1U13
0-70	10.3	7.2	66	225	79	Y070LXU1030	1U13
0-75	6	4.2	66	225	79	Y075LXU600	1U13
0-75	9.6	6.7	66	225	79	Y075LXU960	1U13
0-80	5.6	3.9	66	225	79	Y080LXU560	1U13
0-80	9	6.3	66	225	79	Y080LXU900	1U13
0-90	5	3.5	66	225	79	Y090LXU500	1U13
0-90	8	5.6	66	225	79	Y090LXU800	1U13
0-100	4.5	3.2	88	300	79	Y0100LXU450	1U13
0-100	7.2	5	88	300	79	Y0100LXU720	1U13
0-110	4.1	2.9	88	300	79	Y0110LXU410	1U13
0-110	6.5	4.5	88	300	79	Y0110LXU650	1U13
0-120	3.8	2.7	88	300	79	Y0120LXU380	1U13
0-120	6	4.2	88	300	79	Y0120LXU600	1U13
0-125	3.6	2.5	88	300	79	Y0125LXU360	1U13
0-125	5.7	4	88	300	79	Y0125LXU570	1U13
0-135	3.3	2.3	103	350	79	Y0135LXU330	1U13
0-135	5.3	3.7	103	350	79	Y0135LXU530	1U13

WIDE ADJUST OUTPUT BENCHTOP MODELS

Output Voltage Range	Output Current Amps. at 40°C	71°C	Ripple mV (@ 25 MHz BW) RMS	P-P	Effic. (Typ.) %*	Model	Case Size
0-5	40	31	15	50	64	Y05LXB4000	1B13
0-5	70	49	15	50	64	Y05LXB7000	1B13
0-8	40	28	30	100	67	Y08LXB4000	1B13
0-8	64	44	30	100	67	Y08LXB6400	1B13
0-9	38	27	30	100	67	Y09LXB3800	1B13
0-9	62	43	30	100	67	Y09LXB6200	1B13
0-10	37	26	30	100	68	Y010LXB3700	1B13
0-10	60	42	30	100	68	Y010LXB6000	1B13
0-12	37	26	30	100	68	Y012LXB3700	1B13
0-12	60	42	30	100	68	Y012LXB6000	1B13
0-14	32	22	30	100	70	Y014LXB3200	1B13
0-14	51	35	30	100	70	Y014LXB5100	1B13
0-15	30	21	30	100	70	Y015LXB3000	1B13
0-15	48	34	30	100	70	Y015LXB4800	1B13
0-16	28	20	30	100	70	Y016LXB2800	1B13
0-16	45	31	30	100	70	Y016LXB4500	1B13
0-18	25	18	30	100	71	Y018LXB2500	1B13
0-18	40	28	30	100	71	Y018LXB4000	1B13
0-22	20	14	30	100	73	Y022LXB2000	1B13
0-22	32	22	30	100	73	Y022LXB3200	1B13
0-24	18	13	30	100	73	Y024LXB1800	1B13
0-24	30	21	30	100	73	Y024LXB3000	1B13
0-25	18	13	30	100	73	Y025LXB1800	1B13
0-25	28.8	20	30	100	73	Y025LXB2880	1B13
0-30	15	11	45	150	75	Y030LXB1500	1B13
0-30	24	16	45	150	75	Y030LXB2400	1B13
0-35	12.8	9	45	150	75	Y035LXB1280	1B13
0-35	20.5	14	45	150	75	Y035LXB2050	1B13
0-36	12	8	45	150	75	Y036LXB1200	1B13
0-36	20	14	45	150	75	Y036LXB2000	1B13
0-40	11	8	45	150	76	Y040LXB1100	1B13
0-40	18	12	45	150	76	Y040LXB1800	1B13
0-50	9	6	45	150	76	Y050LXB900	1B13
0-50	15	10	45	150	76	Y050LXB1500	1B13
0-60	7.5	5.3	45	150	79	Y060LXB750	1B13
0-60	12	8.4	45	150	79	Y060LXB1200	1B13
0-70	6.4	4.5	66	225	79	Y070LXB640	1B13
0-70	10.3	7.2	66	225	79	Y070LXB1030	1B13
0-75	6	4.2	66	225	79	Y075LXB600	1B13
0-75	9.6	6.7	66	225	79	Y075LXB960	1B13
0-80	5.6	3.9	66	225	79	Y080LXB560	1B13
0-80	9	6.3	66	225	79	Y080LXB900	1B13
0-90	5	3.5	66	225	79	Y090LXB500	1B13
0-90	8	5.6	66	225	79	Y090LXB800	1B13
0-100	4.5	3.2	88	300	79	Y0100LXB450	1B13
0-100	7.2	5	88	300	79	Y0100LXB720	1B13
0-110	4.1	2.9	88	300	79	Y0110LXB410	1B13
0-110	6.5	4.5	88	300	79	Y0110LXB650	1B13
0-120	3.8	2.7	88	300	79	Y0120LXB380	1B13
0-120	6	4.2	88	300	79	Y0120LXB600	1B13
0-125	3.6	2.5	88	300	79	Y0125LXB360	1B13
0-125	5.7	4	88	300	79	Y0125LXB570	1B13
0-135	3.3	2.3	103	350	79	Y0135LXB330	1B13
0-135	5.3	3.7	103	350	79	Y0135LXB530	1B13

1U SWITCHING REGULATED (to 720 watts)

OPTIONAL AUXILIARY OUTPUT

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

AUXILIARY OUTPUT SPECIFICATIONS

Startup Time: 800 mS typical.

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

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

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

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

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%.

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

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

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

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

Thermal Protection: Thermostat, self-resetting.

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

W24LTU3000 **E1 G13 H M3 S** **-** **24NTU750**

Standard Model Number
Choose from standard single or wide adjust outputs (see tables on pages 4 - 6 for available output ratings). Use '**U**' for rack mounting, substitute '**B**' for benchtop.

Auxiliary Output or **Digital Interface Option**
Choose to add an auxiliary output (see table on page 7 for available output ratings) or digital interface.

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

All options listed on page C14 apply only to the models listed on pages C16 - C18. The optional Auxiliary Output has only 'Inhibit' functionality in addition to output and sense connections.

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Acopian 1U Power Supplies. Everything you need, nothing you don't!

These power supplies feature both single output and wide-adjust output voltages from 1vdc-135vdc (single) and 0v-5vdc to 0v-135vdc (wide-adjust), with current capabilities up to 70A. Optional metering and digital interfaces including RS232, RS485, Ethernet, and USB can be specified. All units are UL60950, UL508, CE and ROHS Certified. And, since all features come a la carte, it's a cost-effective solution that's a perfect choice for engineers and buyers alike!

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POWER SUPPLIES

SWITCHING REGULATED AC–DC

single output & wide adjust output

2U SWITCHING REGULATED (to 1400 watts) (Power Factor Correction and Universal Input)

RACK MOUNTING & BENCHTOP
AC-DC

• Five Year Warranty

RoHS COMPLIANT

(Handles optional)

STANDARD FEATURES

- Digital Voltage & Current Meters
- Front Panel Controls
- 'AC on' indicator
- Constant voltage and constant current modes
- Universal input
- Power Factor Correction
- Short circuit and overload protection
- Thermal protection
- No minimum load required
- Internal EMI Filter
- Pluggable connectors for input, output and control wiring
- Remote Sensing
- 'Soft start' operation
- Front panel circuit breaker

SPECIFICATIONS

WARNING: HIGH LEAKAGE CURRENT. EARTH CONNECTION ESSENTIAL BEFORE CONNECTING SUPPLY.

Input Voltage: 100-265 VAC, 49-420 Hz, single phase. AC Input, max.: 22A (1400W)

Inrush current: Cold start, (thermistor limiter) 66A peak @115 VAC (typical); 130A peak @230 VAC (typical).

Startup Time: 1 second (typical).

Input Undervoltage: An input of less than 100 VAC will not damage power supply.

Power Factor: 0.97 typical at 115 VAC, 60Hz and full load. Complies with EN61000-3-2.

Regulation (in constant voltage mode):

Output below 60A:
Line Regulation: ±0.1% or 10 mV, whichever is greater.
Load Regulation: ±0.1% or 10 mV, whichever is greater.

Output above 60A:
Line Regulation: ±0.1% or 30 mV, whichever is greater.
Load Regulation: ±0.1% or 30 mV, whichever is greater.

Regulation, Ripple (in constant current mode):

Output below 60A:
Line Regulation: ±0.4% or 60mA.
Load Regulation: ±1% or 200mA.
Current Ripple: 1% rms.

Output above 60A:
Line Regulation: ±1% or 0.5A.
Load Regulation: ±2% or 2A.
Current Ripple: 2% rms.

Ambient Operating Temperature: 0 to +71°C.

Temperature Coefficient (after 30 minute warm-up):
Voltage mode; ±0.04%/°C (typical).
Current mode; ±0.2%/°C (typical).

Drift (voltage mode or current mode): ±0.2% (typical) over 8 hours, after 30 minute warmup.

Storage Temperature: –40 to +85°C.

Holdup Time: 10mS minimum with full load.

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

Polarity: Output is floating and may be used in either polarity, except in programmable/wide adjust models.

Remote Sensing: Compensates up to 0.5 Vdc drop per output line (or within the limits of the output voltage adjustment range).

Output Adjustment: Voltage and current adjustments are located on the front panel.

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

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

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

Internal Failure Protection: Provided by internal fuse.

Switching Frequency: 110 kHz (typical).

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

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

Cooling: Forced-air cooled. Air enters front of power supply and exits from rear cover. Fan noise rated at 54dB for 1400w models.

Enable: To enable the DC output, the enable terminal must be tied to the -DC output. An open collector or contact closure can be used.

Output Programming (Wide Adjust models):
The output voltage and current may be programmed from 0 to full rating by means of control voltage inputs of 0 to +10 Vdc

Output may drop to 0v or 1/2 of output set voltage.

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2U SWITCHING REGULATED (to 1400 watts)

SPECIFICATIONS (continued)

Voltage Monitor Terminal: Permits remote monitoring of output voltage, stepped down by a ratio of 10:1 (for 3.3v to 90v models) or 100:1 (for 100v to 270v models). Accuracy is 0.5% of maximum rated output voltage.

For models with 0-5v programming option "C5": Permits remote monitoring of output voltage, stepped down by a ratio of 10:1 (for 3.3v to 45v models) or 100:1 (for 48v to 270v models). Accuracy is 0.5% of maximum rated output voltage.

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

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

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

OPTIONS

Digital Interface: Can be used to monitor and/or control output voltage and current. Includes isolated Ethernet (10/100Mbps), RS232, and USB interfaces (plus RS485 with option "DIO2"), utilizing 16 bit DAC and ADC. To order, add either suffix "DIO1" or suffix "DIO2".

Handles: To order, add suffix "H" to the model number.

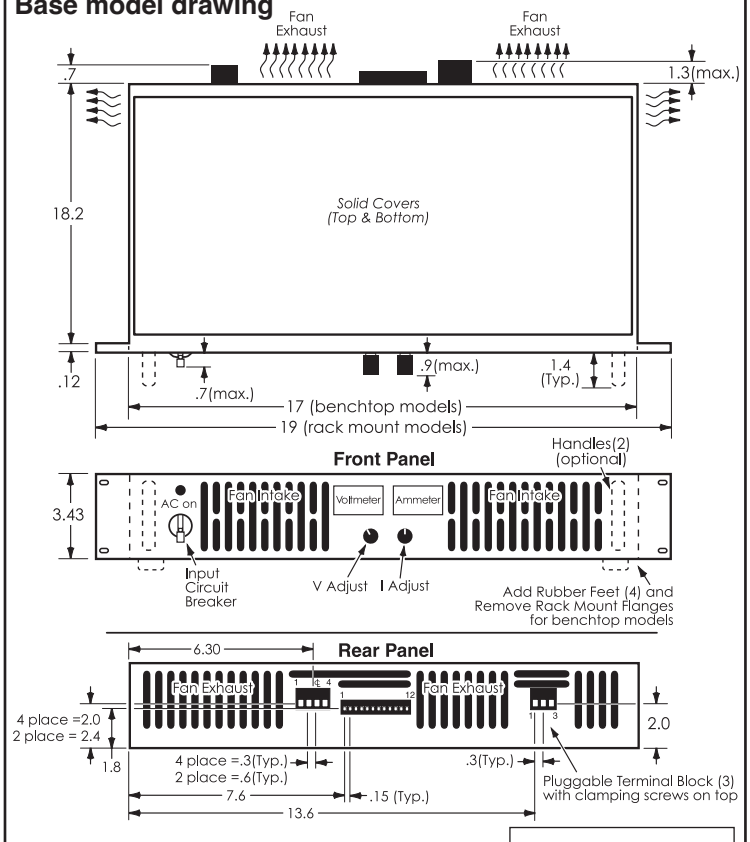
Relay Alarm Contacts (Single Output models only)**:** NC/C/NO relay contacts that change state when output voltage drops more than 10% below nominal. To order, add suffix "G1" to model number.

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

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

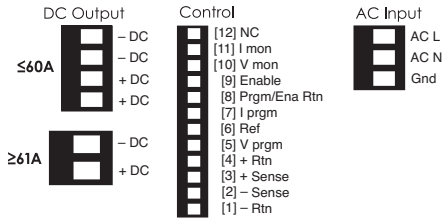
Shaft Locks: Instead of standard voltage and current adjust knobs. Provides screwdriver slot adjustment with shaft locks exerting an even frictional drag over the control shafts, resisting accidental rotation. To order, add suffix "S1" to the model number.

Base model drawing

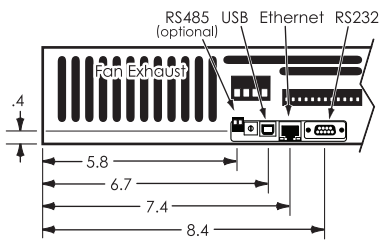


All dimensions in inches.

Pluggable terminal block connections



Digital Interface option (Rear Panel Detail)



All dimensions in inches.

2U SWITCHING REGULATED (to 1400 watts)

SINGLE OUTPUT RACK MOUNTING MODELS

Nominal Output Voltage	Adjust Range ±V	Output Current Amps. at 40°C	71°C	Ripple mV (@ 25 MHz BW) RMS	P-P	Effic. (Typ.) %	Model	Case Size
10	.5	120	84	50	150	64	W10LT2U12000	2U18
12	1	120	84	50	150	65	W12LT2U12000	2U18
14	1	100	70	50	150	65	W14LT2U10000	2U18
16	1	90	63	50	150	67	W16LT2U9000	2U18
18	1	80	56	50	150	67	W18LT2U8000	2U18
20	1	72	50.4	50	150	68	W20LT2U7200	2U18
24	1	60	42	50	150	73	W24LT2U6000	2U18
25	1	57.6	40.4	50	150	73	W25LT2U5760	2U18
26	1	55.4	38.8	50	150	73	W26LT2U5540	2U18
28	1	51.4	36	50	150	73	W28LT2U5140	2U18
30	1	48	33.6	58	175	73	W30LT2U4800	2U18
32	1	45	31.6	58	175	73	W32LT2U4500	2U18
34	1	42.4	29.6	58	175	73	W34LT2U4240	2U18
36	1	40	28	58	175	75	W36LT2U4000	2U18
38	1	37.8	26.4	58	175	75	W38LT2U3780	2U18
40	1	36	25.2	58	175	76	W40LT2U3600	2U18
42	1	34.2	24	58	175	76	W42LT2U1710	2U18
45	1	32	22.4	58	175	76	W45LT2U3200	2U18
48	1	30	21	58	175	78	W48LT2U3000	2U18
50	1	28.8	20	58	175	78	W50LT2U2880	2U18
55	1	26.2	18.4	58	175	78	W55LT2U2620	2U18
60	1	24	16.8	58	175	78	W60LT2U2400	2U18
70	1	20.6	14.4	83	250	78	W70LT2U2060	2U18
75	1	19.2	13.4	83	250	78	W75LT2U1920	2U18
80	1	18	12.6	83	250	78	W80LT2U1800	2U18
90	1	16	11.2	83	250	78	W90LT2U1600	2U18
100	1	14.4	10	108	325	78	W100LT2U1440	2U18
110	1	13	9	108	325	78	W110LT2U1300	2U18
120	1	12	8.4	108	325	78	W120LT2U1200	2U18
125	1	11.4	8	108	325	78	W125LT2U1140	2U18
135	1	10.6	7.4	125	375	78	W135LT2U1060	2U18
150	1	9.6	6.7	135	400	78	W150LT2U960	2U18
200	1	7.2	5.1	135	400	78	W200LT2U720	2U18
270	1	5.3	3.7	135	400	78	W270LT2U530	2U18

SINGLE OUTPUT BENCHTOP MODELS

Nominal Output Voltage	Adjust Range ±V	Output Current Amps. at 40°C	71°C	Ripple mV (@ 25 MHz BW) RMS	P-P	Effic. (Typ.) %	Model	Case Size
10	.5	120	84	50	150	64	W10LT2B12000	2B18
12	1	120	84	50	150	65	W12LT2B12000	2B18
14	1	100	70	50	150	65	W14LT2B10000	2B18
16	1	90	63	50	150	67	W16LT2B9000	2B18
18	1	80	56	50	150	67	W18LT2B8000	2B18
20	1	72	50.4	50	150	68	W20LT2B7200	2B18
24	1	60	42	50	150	73	W24LT2B6000	2B18
25	1	57.6	40.4	50	150	73	W25LT2B5760	2B18
26	1	55.4	38.8	50	150	73	W26LT2B5540	2B18
28	1	51.4	36	50	150	73	W28LT2B5140	2B18
30	1	48	33.6	58	175	73	W30LT2B4800	2B18
32	1	45	31.6	58	175	73	W32LT2B4500	2B18
34	1	42.4	29.6	58	175	73	W34LT2B4240	2B18
36	1	40	28	58	175	75	W36LT2B4000	2B18
38	1	37.8	26.4	58	175	75	W38LT2B3780	2B18
40	1	36	25.2	58	175	76	W40LT2B3600	2B18
42	1	34.2	24	58	175	76	W42LT2B1710	2B18
45	1	32	22.4	58	175	76	W45LT2B3200	2B18
48	1	30	21	58	175	78	W48LT2B3000	2B18
50	1	28.8	20	58	175	78	W50LT2B2880	2B18
55	1	26.2	18.4	58	175	78	W55LT2B2620	2B18
60	1	24	16.8	58	175	78	W60LT2B2400	2B18
70	1	20.6	14.4	83	250	78	W70LT2B2060	2B18
75	1	19.2	13.4	83	250	78	W75LT2B1920	2B18
80	1	18	12.6	83	250	78	W80LT2B1800	2B18
90	1	16	11.2	83	250	78	W90LT2B1600	2B18
100	1	14.4	10	108	325	78	W100LT2B1440	2B18
110	1	13	9	108	325	78	W110LT2B1300	2B18
120	1	12	8.4	108	325	78	W120LT2B1200	2B18
125	1	11.4	8	108	325	78	W125LT2B1140	2B18
135	1	10.6	7.4	125	375	78	W135LT2B1060	2B18
150	1	9.6	6.7	135	400	78	W150LT2B960	2B18
200	1	7.2	5.1	135	400	78	W200LT2B720	2B18
270	1	5.3	3.7	135	400	78	W270LT2B530	2B18

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2U SWITCHING REGULATED (to 1400 watts)

WIDE ADJUST OUTPUT RACK MOUNTING 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.) %*	Model	Case Size
0-10	120	84	50	150	64	Y010LX2U12000	2U18
0-12	120	84	50	150	65	Y012LX2U12000	2U18
0-14	100	70	50	150	65	Y014LX2U10000	2U18
0-16	90	63	50	150	67	Y016LX2U9000	2U18
0-18	80	56	50	150	67	Y018LX2U8000	2U18
0-24	60	42	50	150	73	Y024LX2U6000	2U18
0-25	57.6	40	50	150	73	Y025LX2U5760	2U18
0-30	48	32	58	175	73	Y030LX2U4800	2U18
0-35	41	28	58	175	73	Y035LX2U4100	2U18
0-36	40	28	58	175	75	Y036LX2U4000	2U18
0-40	36	24	58	175	76	Y040LX2U3600	2U18
0-50	28.8	20.2	58	175	78	Y050LX2U2880	2U18
0-60	24	16.8	58	175	78	Y060LX2U2400	2U18
0-70	20.5	14.4	83	250	78	Y070LX2U2050	2U18
0-75	19.2	13.4	83	250	78	Y075LX2U1920	2U18
0-80	18	12.6	83	250	78	Y080LX2U1800	2U18
0-90	16	11.2	83	250	78	Y090LX2U1600	2U18
0-100	15	10.5	108	325	78	Y0100LX2U1500	2U18
0-110	13.1	9.1	108	325	78	Y0110LX2U1310	2U18
0-120	12	8.4	108	325	78	Y0120LX2U1200	2U18
0-125	11.4	8	108	325	78	Y0125LX2U1140	2U18
0-135	10.6	7.4	125	375	78	Y0135LX2U1060	2U18
0-150	9.6	6.7	135	400	78	Y0150LX2U960	2U18
0-200	7.2	5.1	135	400	78	Y0200LX2U720	2U18
0-270	5.3	3.7	135	400	78	Y0270LX2U530	2U18

WIDE ADJUST OUTPUT BENCHTOP 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.) %*	Model	Case Size
0-10	120	84	50	150	64	Y010LX2B12000	2B18
0-12	120	84	50	150	65	Y012LX2B12000	2B18
0-14	100	70	50	150	65	Y014LX2B10000	2B18
0-16	90	63	50	150	67	Y016LX2B9000	2B18
0-18	80	56	50	150	67	Y018LX2B8000	2B18
0-24	60	42	50	150	73	Y024LX2B6000	2B18
0-25	57.6	40	50	150	73	Y025LX2B5760	2B18
0-30	48	32	58	175	73	Y030LX2B4800	2B18
0-35	41	28	58	175	73	Y035LX2B4100	2B18
0-36	40	28	58	175	75	Y036LX2B4000	2B18
0-40	36	24	58	175	76	Y040LX2B3600	2B18
0-50	28.8	20.2	58	175	78	Y050LX2B2880	2B18
0-60	24	16.8	58	175	78	Y060LX2B2400	2B18
0-70	20.5	14.4	83	250	78	Y070LX2B2050	2B18
0-75	19.2	13.4	83	250	78	Y075LX2B1920	2B18
0-80	18	12.6	83	250	78	Y080LX2B1800	2B18
0-90	16	11.2	83	250	78	Y090LX2B1600	2B18
0-100	15	10.5	108	325	78	Y0100LX2B1500	2B18
0-110	13.1	9.1	108	325	78	Y0110LX2B1310	2B18
0-120	12	8.4	108	325	78	Y0120LX2B1200	2B18
0-125	11.4	8	108	325	78	Y0125LX2B1140	2B18
0-135	10.6	7.4	125	375	78	Y0135LX2B1060	2B18
0-150	9.6	6.7	135	400	78	Y0150LX2B960	2B18
0-200	7.2	5.1	135	400	78	Y0200LX2B720	2B18
0-270	5.3	3.7	135	400	78	Y0270LX2B530	2B18

DC-DC Converters

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

- Shipped Within 3 Days
- One Year Warranty

RoHS
COMPLIANT

These versatile DC-DC Converters are ideally suited for powering a wide variety of analog and digital circuitry, such as op amps, logic and microprocessors. They may be mounted directly on a printed circuit board for OEM applications, or installed in a socket for developmental and small quantity requirements. For DC-DC Converters with screw terminals, see pages D3 and D4.

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.

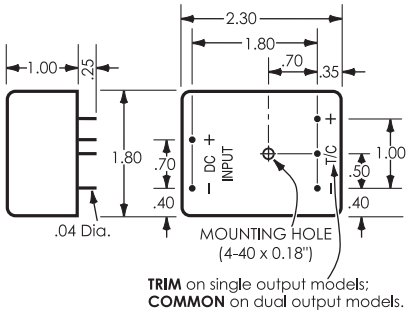
Temperature Coefficient: 0.02%/°C (Typical).

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

Storage Temperature: –40 to +85°C.

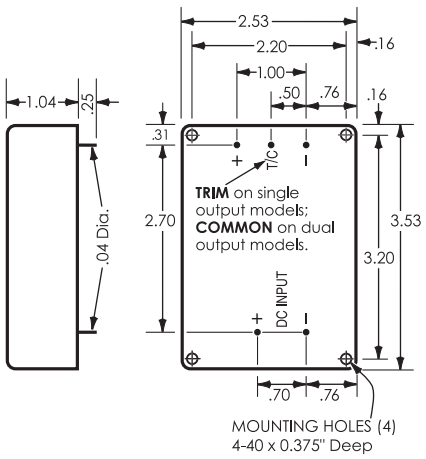
Humidity: 20% to 80% R.H. (non-condensing).

Mounting: May be mounted on printed circuit board or in socket (see page H4).



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

All dimensions in inches.



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

All dimensions in inches.

Acopian

SINGLE OUTPUT, FOR PC BOARD MOUNTING

Nominal Input Voltage	Nominal Output Voltage	Output Current Amps. at 40°C	55°C	71°C	Model	Case Size
5	5	1.25	1.25	1.00	5E5E125	ESC-10
5	5	2.50	2.25	2.00	5E5E250	ELC-10
5	6	1.00	1.00	.80	5E6E100	ESC-10
5	6	2.00	1.80	1.60	5E6E200	ELC-10
5	8	.75	.75	.60	5E8E75	ESC-10
5	8	1.50	1.35	1.20	5E8E150	ELC-10
5	9	.70	.70	.55	5E9E70	ESC-10
5	9	1.40	1.25	1.10	5E9E140	ELC-10
5	10	.65	.65	.50	5E10E65	ESC-10
5	10	1.30	1.15	1.00	5E10E130	ELC-10
5	12	.60	.60	.50	5E12E60	ESC-10
5	12	1.20	1.10	1.00	5E12E120	ELC-10
5	13	.55	.55	.45	5E13E55	ESC-10
5	13	1.10	1.00	.90	5E13E110	ELC-10
5	15	.50	.50	.40	5E15E50	ESC-10
5	15	1.00	.90	.80	5E15E100	ELC-10
5	18	.40	.40	.30	5E18E40	ESC-10
5	18	.80	.70	.60	5E18E80	ELC-10
5	20	.35	.35	.28	5E20E35	ESC-10
5	20	.70	.60	.50	5E20E70	ELC-10
5	24	.25	.25	.20	5E24E25	ESC-10
5	24	.60	.55	.50	5E24E60	ELC-10
5	28	.25	.25	.20	5E28E25	ESC-10
5	28	.50	.45	.40	5E28E50	ELC-10
12	5	1.25	1.25	1.00	12E5E125	ESC-10
12	5	2.50	2.25	2.00	12E5E250	ELC-10
12	6	1.00	1.00	.80	12E6E100	ESC-10
12	6	2.00	1.80	1.60	12E6E200	ELC-10
12	8	.75	.75	.60	12E8E75	ESC-10
12	8	1.50	1.35	1.20	12E8E150	ELC-10
12	9	.70	.70	.55	12E9E70	ESC-10
12	9	1.40	1.25	1.10	12E9E140	ELC-10
12	10	.65	.65	.50	12E10E65	ESC-10
12	10	1.30	1.15	1.00	12E10E130	ELC-10
12	12	.60	.60	.50	12E12E60	ESC-10
12	12	1.20	1.10	1.00	12E12E120	ELC-10
12	13	.55	.55	.45	12E13E55	ESC-10
12	13	1.10	1.00	.90	12E13E110	ELC-10
12	15	.50	.50	.40	12E15E50	ESC-10
12	15	1.00	.90	.80	12E15E100	ELC-10
12	18	.40	.40	.30	12E18E40	ESC-10
12	18	.80	.70	.60	12E18E80	ELC-10
12	20	.35	.35	.28	12E20E35	ESC-10
12	20	.70	.60	.50	12E20E70	ELC-10
12	24	.25	.25	.20	12E24E25	ESC-10
12	24	.60	.55	.50	12E24E60	ELC-10
12	28	.25	.25	.20	12E28E25	ESC-10
12	28	.50	.45	.40	12E28E50	ELC-10
15	5	1.25	1.25	1.00	15E5E125	ESC-10
15	5	2.50	2.25	2.00	15E5E250	ELC-10
15	6	1.00	1.00	.80	15E6E100	ESC-10
15	6	2.00	1.80	1.60	15E6E200	ELC-10
15	8	.75	.75	.60	15E8E75	ESC-10
15	8	1.50	1.35	1.20	15E8E150	ELC-10
15	9	.70	.70	.55	15E9E70	ESC-10
15	9	1.40	1.25	1.10	15E9E140	ELC-10
15	10	.65	.65	.50	15E10E65	ESC-10
15	10	1.30	1.15	1.00	15E10E130	ELC-10
15	12	.60	.60	.50	15E12E60	ESC-10
15	12	1.20	1.10	1.00	15E12E120	ELC-10
15	13	.55	.55	.45	15E13E55	ESC-10
15	13	1.10	1.00	.90	15E13E110	ELC-10
15	15	.50	.50	.40	15E15E50	ESC-10
15	15	1.00	.90	.80	15E15E100	ELC-10
15	18	.40	.40	.30	15E18E40	ESC-10
15	18	.80	.70	.60	15E18E80	ELC-10
15	20	.35	.35	.28	15E20E35	ESC-10
15	20	.70	.60	.50	15E20E70	ELC-10
15	24	.25	.25	.20	15E24E25	ESC-10
15	24	.60	.55	.50	15E24E60	ELC-10
15	28	.25	.25	.20	15E28E25	ESC-10
15	28	.50	.45	.40	15E28E50	ELC-10
24	5	1.25	1.25	1.00	24E5E125	ESC-10
24	5	2.50	2.25	2.00	24E5E250	ELC-10
24	6	1.00	1.00	.80	24E6E100	ESC-10
24	6	2.00	1.80	1.60	24E6E200	ELC-10
24	8	.75	.75	.60	24E8E75	ESC-10
24	8	1.50	1.35	1.20	24E8E150	ELC-10
24	9	.70	.70	.55	24E9E70	ESC-10
24	9	1.40	1.25	1.10	24E9E140	ELC-10
24	10	.65	.65	.50	24E10E65	ESC-10
24	10	1.30	1.15	1.00	24E10E130	ELC-10
24	12	.60	.60	.50	24E12E60	ESC-10
24	12	1.20	1.10	1.00	24E12E120	ELC-10
24	13	.55	.55	.45	24E13E55	ESC-10
24	13	1.10	1.00	.90	24E13E110	ELC-10
24	15	.50	.50	.40	24E15E50	ESC-10
24	15	1.00	.90	.80	24E15E100	ELC-10
24	18	.40	.40	.30	24E18E40	ESC-10
24	18	.80	.70	.60	24E18E80	ELC-10
24	20	.35	.35	.28	24E20E35	ESC-10
24	20	.70	.60	.50	24E20E70	ELC-10
24	24	.25	.25	.20	24E24E25	ESC-10
24	24	.60	.55	.50	24E24E60	ELC-10
24	28	.25	.25	.20	24E28E25	ESC-10
24	28	.50	.45	.40	24E28E50	ELC-10
28	5	1.25	1.25	1.00	28E5E125	ESC-10
28	5	2.50	2.25	2.00	28E5E250	ELC-10
28	6	1.00	1.00	.80	28E6E100	ESC-10
28	6	2.00	1.80	1.60	28E6E200	ELC-10
28	8	.75	.75	.60	28E8E75	ESC-10
28	8	1.50	1.35	1.20	28E8E150	ELC-10
28	9	.70	.70	.55	28E9E70	ESC-10
28	9	1.40	1.25	1.10	28E9E140	ELC-10
28	10	.65	.65	.50	28E10E65	ESC-10
28	10	1.30	1.15	1.00	28E10E130	ELC-10
28	12	.60	.60	.50	28E12E60	ESC-10
28	12	1.20	1.10	1.00	28E12E120	ELC-10
28	13	.55	.55	.45	28E13E55	ESC-10
28	13	1.10	1.00	.90	28E13E110	ELC-10
28	15	.50	.50	.40	28E15E50	ESC-10
28	15	1.00	.90	.80	28E15E100	ELC-10
28	18	.40	.40	.30	28E18E40	ESC-10
28	18	.80	.70	.60	28E18E80	ELC-10
28	20	.35	.35	.28	28E20E35	ESC-10
28	20	.70	.60	.50	28E20E70	ELC-10
28	24	.25	.25	.20	28E24E25	ESC-10
28	24	.60	.55	.50	28E24E60	ELC-10
28	28	.25	.25	.20	28E28E25	ESC-10
28	28	.50	.45	.40	28E28E50	ELC-10
48	5	1.25	1.25	1.00	48E5E125	ESC-10
48	6	1.00	1.00	.80	48E6E100	ESC-10
48	8	.75	.75	.60	48E8E75	ESC-10
48	9	.70	.70	.55	48E9E70	ESC-10
48	10	.65	.65	.50	48E10E65	ESC-10
48	12	.60	.60	.50	48E12E60	ESC-10
48	13	.55	.55	.45	48E13E55	ESC-10
48	15	.50	.50	.40	48E15E50	ESC-10
48	18	.40	.40	.30	48E18E40	ESC-10
48	20	.35	.35	.28	48E20E35	ESC-10
48	24	.25	.25	.20	48E24E25	ESC-10
48	28	.25	.25	.20	48E28E25	ESC-10
120 to 180	See pages C1-C2.					

DUAL TRACKING OUTPUTS

Nominal Input Voltage	Nominal Output Voltages	Amps. per Output at 40°C	55°C	71°C	Model	Case Size
5	±10	.30	.30	.25	5E10D30	ESC-10
5	±10	.60	.55	.50	5E10D60	ELC-1_
5	±12	.30	.30	.25	5E12D30	ESC-10
5	±12	.60	.55	.50	5E12D60	ELC-10
5	±15	.25	.25	.25	5E15D25	ESC-10
5	±15	.50	.45	.40	5E15D50	ELC-10
5	±18	.20	.20	.20	5E18D20	ESC-10
5	±18	.40	.35	.30	5E18D40	ELC-10
12	±10	.30	.30	.25	12E10D30	ESC-10
12	±10	.60	.55	.50	12E10D60	ELC-10
12	±12	.30	.30	.25	12E12D30	ESC-10
12	±12	.60	.55	.50	12E12D60	ELC-10
12	±15	.25	.25	.25	12E15D25	ESC-10
12	±15	.50	.45	.40	12E15D50	ELC-10
12	±18	.20	.20	.20	12E18D20	ESC-10
12	±18	.40	.35	.30	12E18D40	ELC-10
15	±10	.30	.30	.25	15E10D30	ESC-10
15	±10	.60	.55	.50	15E10D60	ELC-10
15	±12	.30	.30	.25	15E12D30	ESC-10
15	±12	.60	.55	.50	15E12D60	ELC-10
15	±15	.25	.25	.25	15E15D25	ESC-10
15	±15	.50	.45	.40	15E15D50	ELC-10
15	±18	.20	.20	.20	15E18D20	ESC-10
15	±18	.40	.35	.30	15E18D40	ELC-10
24	±10	.30	.30	.25	24E10D30	ESC-10
24	±10	.60	.55	.50	24E10D60	ELC-10
24	±12	.30	.30	.25	24E12D30	ESC-10
24	±12	.60	.55	.50	24E12D60	ELC-10
24	±15	.25	.25	.25	24E15D25	ESC-10
24	±15	.50	.45	.40	24E15D50	ELC-10
24	±18	.20	.20	.20	24E18D20	ESC-10
24	±18	.40	.35	.30	24E18D40	ELC-10
28	±10	.30	.30	.25	28E10D30	ESC-10
28	±10	.60	.55	.50	28E10D60	ELC-10
28	±12	.30	.30	.25	28E12D30	ESC-10
28	±12	.60	.55	.50	28E12D60	ELC-10
28	±15	.25	.25	.25	28E15D25	ESC-10
28	±15	.50	.45	.40	28E15D50	ELC-10
28	±18	.20	.20	.20	28E18D20	ESC-10
28	±18	.40	.35	.30	28E18D40	ELC-10
48	±10	.30	.30	.25	48E10D30	ESC-10
48	±12	.30	.30	.25	48E12D30	ESC-10
48	±15	.25	.25	.25	48E15D25	ESC-10
48	±18	.20	.20	.20	48E18D20	ESC-10

DC-DC Converters

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

- Shipped Within 3 Days
- One Year Warranty

RoHS
COMPLIANT

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 connectionwithout 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).

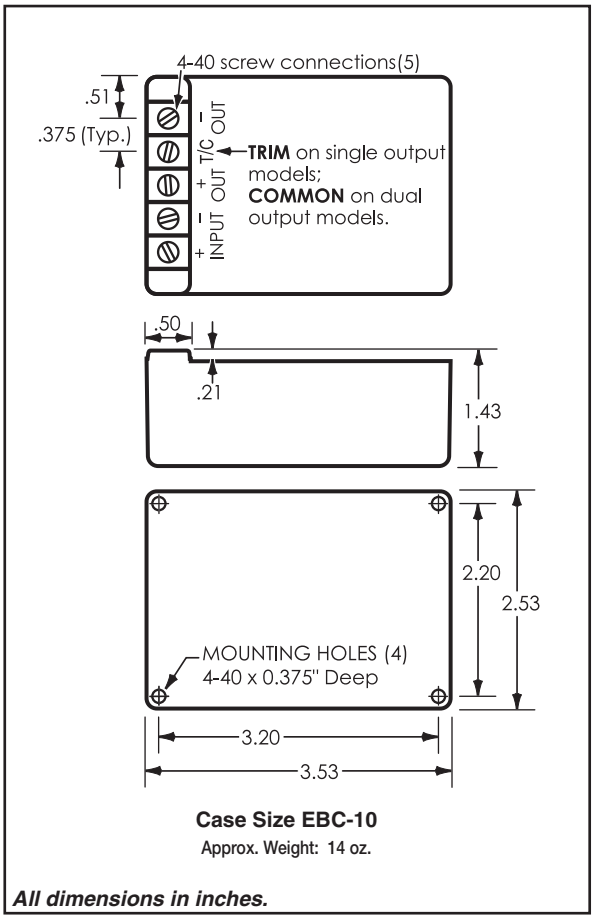
Ambient Operating Temperature: –20 to +71°C.

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 H4.



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

All dimensions in inches.

Online Ordering and Instant Quotes for ALL Acopian power supplies at ***www.acopian.com***
131 Loomis Street, Easton, PA 18045 • Phone: (610) 258-5441 • FAX: (610) 258-2842

DC-DC Converters

Mini Encapsulated - **with screw terminals**

SINGLE OUTPUT, WITH SCREW TERMINALS

Nominal Input Voltage	Nominal Output Voltage	Output Current Amps. at 40°C	55°C	71°C	Regulation Load ±%	Line ±%	Model
5	5	2.50	2.25	2.00	.15	.02	5EB5E250
5	6	2.00	1.80	1.60	.15	.02	5EB6E200
5	8	1.50	1.35	1.20	.10	.02	5EB8E150
5	9	1.40	1.25	1.10	.10	.02	5EB9E140
5	10	1.30	1.15	1.00	.10	.02	5EB10E130
5	12	1.20	1.10	1.00	.05	.02	5EB12E120
5	13	1.10	1.00	.90	.05	.02	5EB13E110
5	15	1.00	.90	.80	.05	.02	5EB15E100
5	18	.80	.70	.60	.05	.02	5EB18E80
5	20	.70	.60	.50	.05	.02	5EB20E70
5	24	.60	.55	.50	.05	.02	5EB24E60
5	28	.50	.45	.40	.05	.02	5EB28E50
12	5	2.50	2.25	2.00	.15	.02	12EB5E250
12	6	2.00	1.80	1.60	.15	.02	12EB6E200
12	8	1.50	1.35	1.20	.10	.02	12EB8E150
12	9	1.40	1.25	1.10	.10	.02	12EB9E140
12	10	1.30	1.15	1.00	.10	.02	12EB10E130
12	12	1.20	1.10	1.00	.05	.02	12EB12E120
12	13	1.10	1.00	.90	.05	.02	12EB13E110
12	15	1.00	.90	.80	.05	.02	12EB15E100
12	18	.80	.70	.60	.05	.02	12EB18E80
12	20	.70	.60	.50	.05	.02	12EB20E70
12	24	.60	.55	.50	.05	.02	12EB24E60
12	28	.50	.45	.40	.05	.02	12EB28E50
15	5	2.50	2.25	2.00	.15	.02	15EB5E250
15	6	2.00	1.80	1.60	.15	.02	15EB6E200
15	8	1.50	1.35	1.20	.10	.02	15EB8E150
15	9	1.40	1.25	1.10	.10	.02	15EB9E140
15	10	1.30	1.15	1.00	.10	.02	15EB10E130
15	12	1.20	1.10	1.00	.05	.02	15EB12E120
15	13	1.10	1.00	.90	.05	.02	15EB13E110
15	15	1.00	.90	.80	.05	.02	15EB15E100
15	18	.80	.70	.60	.05	.02	15EB18E80
15	20	.70	.60	.50	.05	.02	15EB20E70
15	24	.60	.55	.50	.05	.02	15EB24E60
15	28	.50	.45	.40	.05	.02	15EB28E50
24	5	2.50	2.25	2.00	.15	.02	24EB5E250
24	6	2.00	1.80	1.60	.15	.02	24EB6E200
24	8	1.50	1.35	1.20	.10	.02	24EB8E150
24	9	1.40	1.25	1.10	.10	.02	24EB9E140
24	10	1.30	1.15	1.00	.10	.02	24EB10E130
24	12	1.20	1.10	1.00	.05	.02	24EB12E120
24	13	1.10	1.00	.90	.05	.02	24EB13E110
24	15	1.00	.90	.80	.05	.02	24EB15E100
24	18	.80	.70	.60	.05	.02	24EB18E80
24	20	.70	.60	.50	.05	.02	24EB20E70
24	24	.60	.55	.50	.05	.02	24EB24E60
24	28	.50	.45	.40	.05	.02	24EB28E50
28	5	2.50	2.25	2.00	.15	.02	28EB5E250
28	6	2.00	1.80	1.60	.15	.02	28EB6E200
28	8	1.50	1.35	1.20	.10	.02	28EB8E150
28	9	1.40	1.25	1.10	.10	.02	28EB9E140
28	10	1.30	1.15	1.00	.10	.02	28EB10E130
28	12	1.20	1.10	1.00	.05	.02	28EB12E120
28	13	1.10	1.00	.90	.05	.02	28EB13E110
28	15	1.00	.90	.80	.05	.02	28EB15E100
28	18	.80	.70	.60	.05	.02	28EB18E80
28	20	.70	.60	.50	.05	.02	28EB20E70
28	24	.60	.55	.50	.05	.02	28EB24E60
28	28	.50	.45	.40	.05	.02	28EB28E50
120 to 180	See pages C1-C2.						

DUAL TRACKING OUTPUTS

Nominal Input Voltage	Nominal Output Voltages	Amps. per Output at 40°C	55°C	71°C	Regulation Load ±%	Line ±%	Model
5	±10	.60	.55	.50	.05	.02	5EB10D60
5	±12	.60	.55	.50	.05	.02	5EB12D60
5	±15	.50	.45	.40	.05	.02	5EB15D50
5	±18	.40	.35	.30	.05	.02	5EB18D40
12	±10	.60	.55	.50	.05	.02	12EB10D60
12	±12	.60	.55	.50	.05	.02	12EB12D60
12	±15	.50	.45	.40	.05	.02	12EB15D50
12	±18	.40	.35	.30	.05	.02	12EB18D40
15	±10	.60	.55	.50	.05	.02	15EB10D60
15	±12	.60	.55	.50	.05	.02	15EB12D60
15	±15	.50	.45	.40	.05	.02	15EB15D50
15	±18	.40	.35	.30	.05	.02	15EB18D40
24	±10	.60	.55	.50	.05	.02	24EB10D60
24	±12	.60	.55	.50	.05	.02	24EB12D60
24	±15	.50	.45	.40	.05	.02	24EB15D50
24	±18	.40	.35	.30	.05	.02	24EB18D40
28	±10	.60	.55	.50	.05	.02	28EB10D60
28	±12	.60	.55	.50	.05	.02	28EB12D60
28	±15	.50	.45	.40	.05	.02	28EB15D50
28	±18	.40	.35	.30	.05	.02	28EB18D40

DC-DC Converters

Mini Encapsulated - **with touch safe terminal blocks**
REGULATED
single output

- One Year Warranty

RoHS
COMPLIANT

These wide-input DC-DC Converters have the versatility to be used in a broad range of applications. DC inputs are set at 9-18 VDC, with output voltages ranging from 3.3 VDC to 48 VDC and up to 7A. 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. Touch safe terminal blocks provide easy connection without the need for 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. Optional output indicator (DC ON LED) and voltage adjust potentiometer are available for these units as well. Short circuit and thermal protection, and rugged encapsulated construction, assure years of reliable service.

STANDARD FEATURES

- Outputs may be used in series
- Input/Output isolation
- OVP internal protecion
- Short circuit protected
- Small, lightweight

SPECIFICATIONS

Input Voltage: 9-18 Vdc.

Output Ripple (@25 MHz bandwidth)**:** <1% or 50 mV p-p.

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

T/C Terminal: 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: The output may be connected in either polarity.

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: 500 Vdc.

Switching Frequency: 200 kHz minimum.

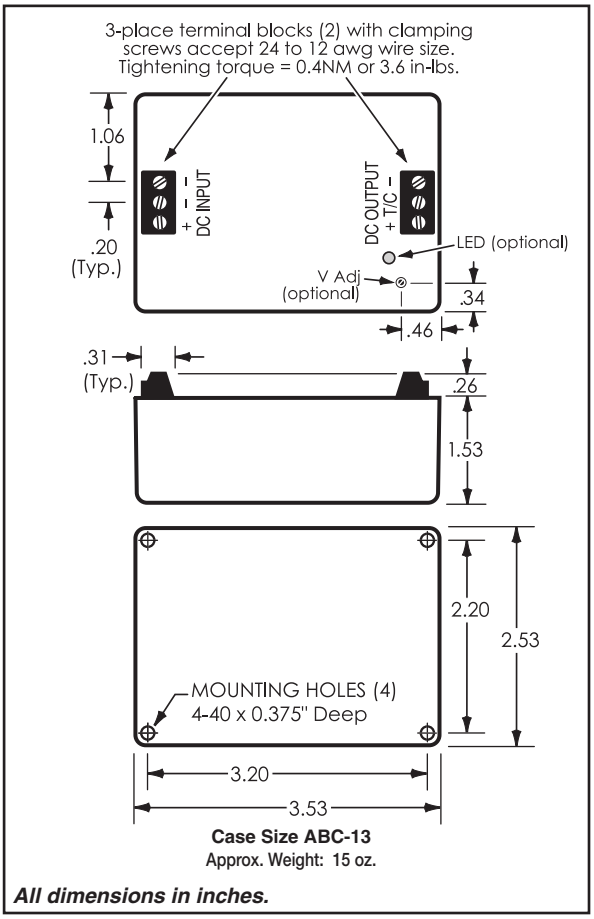
Temperature Coefficient: 0.02%/°C (Typical).

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

Storage Temperature: –40 to +85°C.

Humidity: 10% to 95% ≤40°C R.H. (non-condensing).

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 H4.



OPTIONS

Voltage Adjust Potentiometer: Allows for adjustment range ±2% of nominal output. To order, add suffix "C1" to the model number.

Output Indicator (DC on): Green LED. To order, add suffix "G3" to the model number.

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DC-DC Converters

Mini Encapsulated - **with touch safe terminal blocks**

SINGLE OUTPUT, WITH TERMINAL BLOCKS

Input Voltage Range	Nominal Output Voltage	Output Current Amps. at				Regulation		Model
		25°C	40°C	55°C	71°C	Load	Line	
9-18	3.3	8.00	7.00	6.00	3.50	50mV	15mV	9-18AB3.3A800
9-18	5	8.00	7.00	6.00	3.50	50mV	15mV	9-18AB5A800
9-18	6.5	8.00	7.00	6.00	3.50	50mV	15mV	9-18AB6.5A800
9-18	9	6.67	5.33	4.33	2.67	50mV	15mV	9-18AB9A667
9-18	12	5.00	4.00	3.25	2.00	50mV	15mV	9-18AB12A500
9-18	15	4.00	3.20	2.60	1.60	50mV	15mV	9-18AB15A400
9-18	18	3.33	2.66	2.16	1.33	50mV	15mV	9-18AB18A333
9-18	24	2.50	2.00	1.63	1.00	50mV	15mV	9-18AB24A250
9-18	36	1.66	1.30	1.08	0.66	50mV	15mV	9-18AB36A166
9-18	48	1.15	1.00	0.86	0.44	50mV	15mV	9-18AB48A115

Narrow Profile

DC-DC Converters (to 288 watts)

REGULATED
wide input ranges
single output

- Shipped Within 3 Days
- Five Year Warranty
- UL60950, UL508, CE Certified*

c UL us / CE / RoHS COMPLIANT / c UL us LISTED

(*110 to 350 Vdc Input Models Only)

These state-of-the-art DC-DC converters combine excellent regulation and ripple specifications with broad input ranges. They are available in a large selection of output voltages and current ratings. Accessory mounting kits permit easy installation on a vertical panel, wall or on a DIN rail.

STANDARD FEATURES

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

SPECIFICATIONS

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

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

Startup Time: 800 mS typical.

Regulation:
Line: ±0.05%
Load: ±0.05%

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

Output Indicator (DC out): Green LED.

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

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

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

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

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

Overload/Short Circuit Protection: Current limiting with automatic recovery.
Overvoltage Protection:
Case sizes DN6A, DN6B: automatic reset.
Case sizes DN8, DN8A: latches power supply OFF, reset by momentarily removing DC input power.

Output Inhibit (DN8 and DN8A case sizes only): Applying between +3 and +25 Vdc (relative to the −Out terminal) to the inhibit terminal will disable the supply.

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

Thermal Protection:
Case sizes DN8, DN8A, DN6A: thermostat, self-resetting.
Case size DN6B: inherently protected.

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

Ambient Operating Temperature: 0 to +71°C.

Storage Temperature: −40 to +85°C.

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

Switching Frequency: 100 kHz (Typical).

Dielectric Withstand Voltage:

	inputs to 75 Vdc	110-350 Vdc input	Isolation
Input to output:	2828 Vdc	4242 Vdc	300 Vdc
Input to case:	2828 Vdc	2121 Vdc	300 Vdc
Output to case:	750 Vdc	750 Vdc	300 Vdc

Drawings: See page D9.

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 H3.

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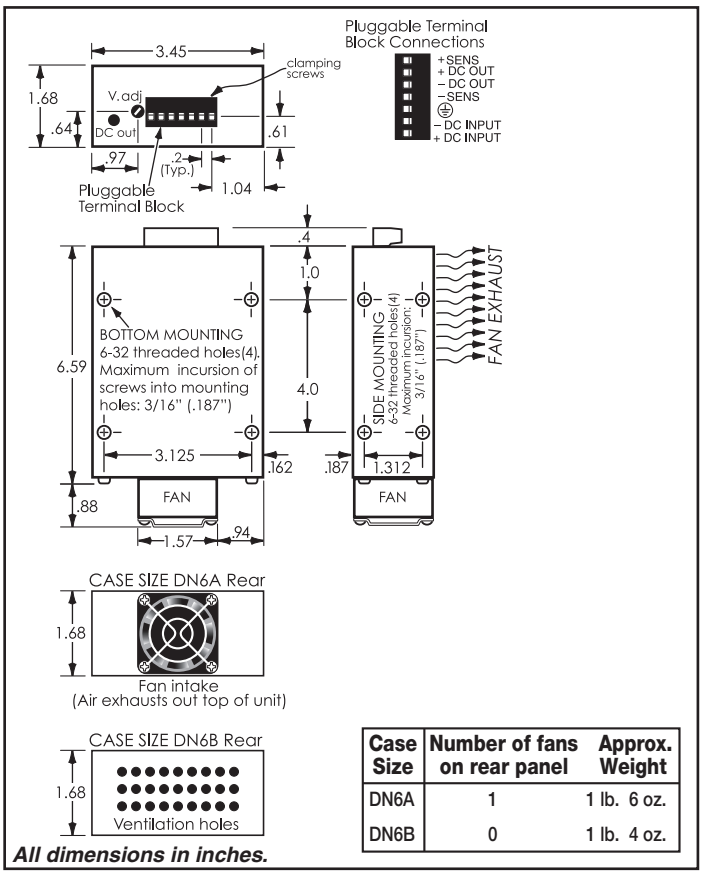
Narrow Profile DC-DC CONVERTERS

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	Case Size	18 to 36 Vdc Input Model	36 to 75 Vdc Input Model	18 to 75 Vdc Input Model	110 to 350 Vdc Input * Model
3.3	.5	10	7	10	50	DN6B	24C3.3FT1000	48C3.3FT1000	----------	----------
3.3	.5	15	10.5	10	50	DN6A	24C3.3FT1500	48C3.3FT1500	----------	----------
3.3	.5	18.5	12.9	10	50	DN8A	----------	----------	18-75C3.3NT1850	230C3.3NT1850
3.3	.5	25	17.5	10	50	DN8	----------	----------	----------	230C3.3NT2500
5	.5	10	7	10	50	DN6B	24C5FT1000	48C5FT1000	----------	*
5	.5	15	10.5	10	50	DN6A	24C5FT1500	48C5FT1500	----------	----------
5	.5	18.5	12.9	10	50	DN8A	----------	----------	18-75C5NT1850	230C5NT1850
5	.5	25	17.5	10	50	DN8	----------	----------	----------	230C5NT2500
6	.5	8.5	6	10	50	DN6B	24C6FT850	48C6FT850	----------	*
6	.5	12.5	8.6	10	50	DN6A	24C6FT1250	48C6FT1250	----------	----------
6	.5	15.4	10.7	10	50	DN8A	----------	----------	18-75C6NT1540	230C6NT1540
6	.5	24	16.8	10	50	DN8	----------	----------	----------	230C6NT2400
7	.5	7	4.9	10	50	DN6B	24C7FT700	48C7FT700	----------	*
7	.5	10.6	7.4	10	50	DN6A	24C7FT1060	48C7FT1060	----------	----------
7	.5	15	10.5	10	50	DN8A	----------	----------	18-75C7NT1500	230C7NT1500
7	.5	23	16.1	10	50	DN8	----------	----------	----------	230C7NT2300
8	.5	6	4.2	15	100	DN6B	24C8FT600	48C8FT600	----------	*
8	.5	9.4	6.6	15	100	DN6A	24C8FT940	48C8FT940	----------	----------
8	.5	14.7	10.3	15	100	DN8A	----------	----------	18-75C8NT1470	230C8NT1470
8	.5	23	16.1	15	100	DN8	----------	----------	----------	230C8NT2300
9	.5	5.5	3.8	15	100	DN6B	24C9FT550	48C9FT550	----------	*
9	.5	9.3	6.5	15	100	DN6A	24C9FT930	48C9FT930	----------	----------
9	.5	14.4	10	15	100	DN8A	----------	----------	18-75C9NT1440	230C9NT1440
9	.5	23	16.1	15	100	DN8	----------	----------	----------	230C9NT2300
10	.5	5	3.5	15	100	DN6B	24C10FT500	48C10FT500	----------	*
10	.5	9.2	6.4	15	100	DN6A	24C10FT920	48C10FT920	----------	----------
10	.5	14.1	9.8	15	100	DN8A	----------	----------	18-75C10NT1410	230C10NT1410
10	.5	22	15.4	15	100	DN8	----------	----------	----------	230C10NT2200
12	.5	4.5	3.1	15	100	DN6B	24C12FT450	48C12FT450	----------	*
12	.5	9.1	6.3	15	100	DN6A	24C12FT910	48C12FT910	----------	----------
12	.5	13.7	9.6	15	100	DN8A	----------	----------	18-75C12NT1370	230C12NT1370
12	.5	22	15.4	15	100	DN8	----------	----------	----------	230C12NT2200
13	.5	4.3	3	15	100	DN6B	24C13FT430	48C13FT430	----------	*
13	.5	8.1	5.6	15	100	DN6A	24C13FT810	48C13FT810	----------	----------
13	.5	12.3	8.6	15	100	DN8A	----------	----------	18-75C13NT1230	230C13NT1230
13	.5	20	14	15	100	DN8	----------	----------	----------	230C13NT2000
14	.5	4.2	3	15	100	DN6B	24C14FT420	48C14FT420	----------	*
14	.5	7.7	5.4	15	100	DN6A	24C14FT770	48C14FT770	----------	----------
14	.5	11.7	8.2	15	100	DN8A	----------	----------	18-75C14NT1170	230C14NT1170
14	.5	19	13.3	15	100	DN8	----------	----------	----------	230C14NT1900
15	.5	4	2.8	15	100	DN6B	24C15FT400	48C15FT400	----------	*
15	.5	7.4	5.2	15	100	DN6A	24C15FT740	48C15FT740	----------	----------
15	.5	11.1	7.8	15	100	DN8A	----------	----------	18-75C15NT1110	230C15NT1110
15	.5	18	12.6	15	100	DN8	----------	----------	----------	230C15NT1800
18	.5	3.3	2.3	15	100	DN6B	24C18FT330	48C18FT330	----------	*
18	.5	6	4.2	15	100	DN6A	24C18FT600	48C18FT600	----------	----------
18	.5	9.2	6.4	15	100	DN8A	----------	----------	18-75C18NT920	230C18NT920
18	.5	15	10.5	15	100	DN8	----------	----------	----------	230C18NT1500
20	.5	3	2.1	15	100	DN6B	24C20FT300	48C20FT300	----------	*
20	.5	5.6	3.9	15	100	DN6A	24C20FT560	48C20FT560	----------	----------
20	.5	8.6	6	15	100	DN8A	----------	----------	18-75C20NT860	230C20NT860
20	.5	14	9.8	15	100	DN8	----------	----------	----------	230C20NT1400
24	.5	2.5	1.8	15	100	DN6B	24C24FT250	48C24FT250	----------	*
24	.5	5	3.5	15	100	DN6A	24C24FT500	48C24FT500	----------	----------
24	.5	7.5	5.3	15	100	DN8A	----------	----------	18-75C24NT750	230C24NT750
24	.5	12	8.4	15	100	DN8	----------	----------	----------	230C24NT1200
25	.5	2.4	1.6	15	100	DN6B	24C25FT240	48C25FT240	----------	*
25	.5	4.8	3.3	15	100	DN6A	24C25FT480	48C25FT480	----------	----------
25	.5	7.2	5	15	100	DN8A	----------	----------	18-75C25NT720	230C25NT720
25	.5	11.2	7.8	15	100	DN8	----------	----------	----------	230C25NT1120
28	.5	2.1	1.5	15	100	DN6B	24C28FT210	48C28FT210	----------	*
28	.5	4.2	2.9	15	100	DN6A	24C28FT420	48C28FT420	----------	----------
28	.5	6.2	4.3	15	100	DN8A	----------	----------	18-75C28NT620	230C28NT620
28	.5	10	7	15	100	DN8	----------	----------	----------	230C28NT1000
30	.5	2	1.4	25	150	DN6B	24C30FT200	48C30FT200	----------	*
30	.5	4	2.8	25	150	DN6A	24C30FT400	48C30FT400	----------	----------
30	.5	5.6	3.9	25	150	DN8A	----------	----------	18-75C30NT560	230C30NT560
30	.5	9	6.3	25	150	DN8	----------	----------	----------	230C30NT900
32	1	1.9	1.3	25	150	DN6B	24C32FT190	48C32FT190	----------	*
32	1	3.7	2.5	25	150	DN6A	24C32FT370	48C32FT370	----------	----------
32	1	5.4	3.7	25	150	DN8A	----------	----------	18-75C32NT540	230C32NT540
32	1	8.6	6	25	150	DN8	----------	----------	----------	230C32NT860
36	1	1.7	1.2	25	150	DN6B	24C36FT170	48C36FT170	----------	*
36	1	3.3	2.3	25	150	DN6A	24C36FT330	48C36FT330	----------	----------
36	1	5	3.5	25	150	DN8A	----------	----------	18-75C36NT500	230C36NT500
36	1	8	5.6	25	150	DN8	----------	----------	----------	230C36NT800
40	1	1.5	1	25	150	DN6B	24C40FT150	48C40FT150	----------	*
40	1	3	2.1	25	150	DN6A	24C40FT300	48C40FT300	----------	----------
40	1	4.3	3	25	150	DN8A	----------	----------	18-75C40NT430	230C40NT430
40	1	7	4.9	25	150	DN8	----------	----------	----------	230C40NT700
48	1	1.2	.8	25	150	DN6B	24C48FT120	48C48FT120	----------	*
48	1	2.5	1.7	25	150	DN6A	24C48FT250	48C48FT250	----------	----------
48	1	3.7	2.6	25	150	DN8A	----------	----------	18-75C48NT370	230C48NT370
48	1	6	4.2	25	150	DN8	----------	----------	----------	230C48NT600
50 to 125							See next page!			

*** See pages C1-C2 for information on Mini Switching Power Supplies that will operate on a 120-180 Vdc input and provide 30 and 50 watt DC outputs.**

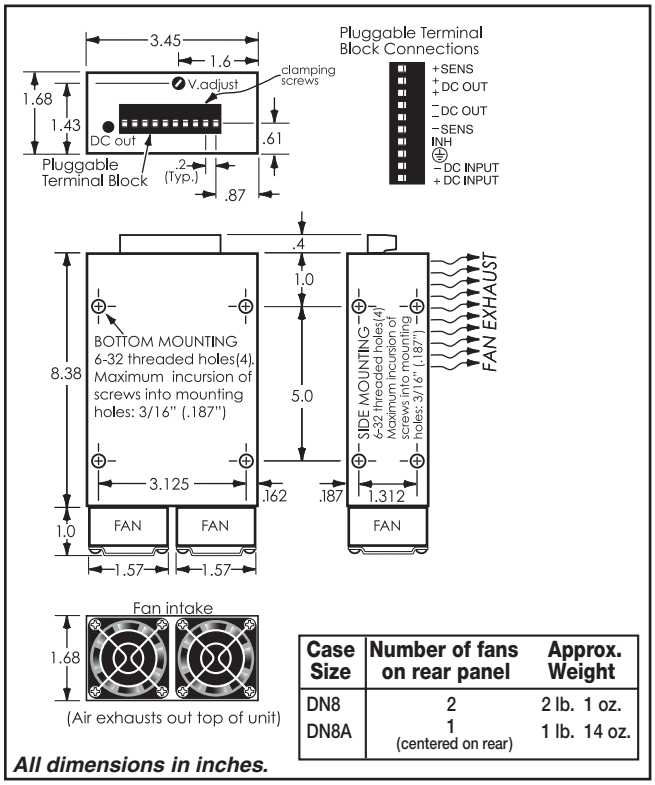
Narrow Profile DC-DC CONVERTERS (continued)

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



Case Size	Number of fans on rear panel	Approx. Weight
DN6A	1	1 lb. 6 oz.
DN6B	0	1 lb. 4 oz.

All dimensions in inches.



Case Size	Number of fans on rear panel	Approx. Weight
DN8	2	2 lb. 1 oz.
DN8A	1 (centered on rear)	1 lb. 14 oz.

All dimensions in inches.

High Voltage AC-DC

MODULAR
REGULATED

Output ranges:
0-1 kVdc to 0-30 kVdc

- Shipped Within 6 Days
- Five Year Warranty
  (internal encapsulated module - One Year)

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 protected for short circuit and short term arcing.

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 H3.

OPTIONS

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

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 on one end) instead of the flying lead. To order, add suffix letter "T" to the model number.

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

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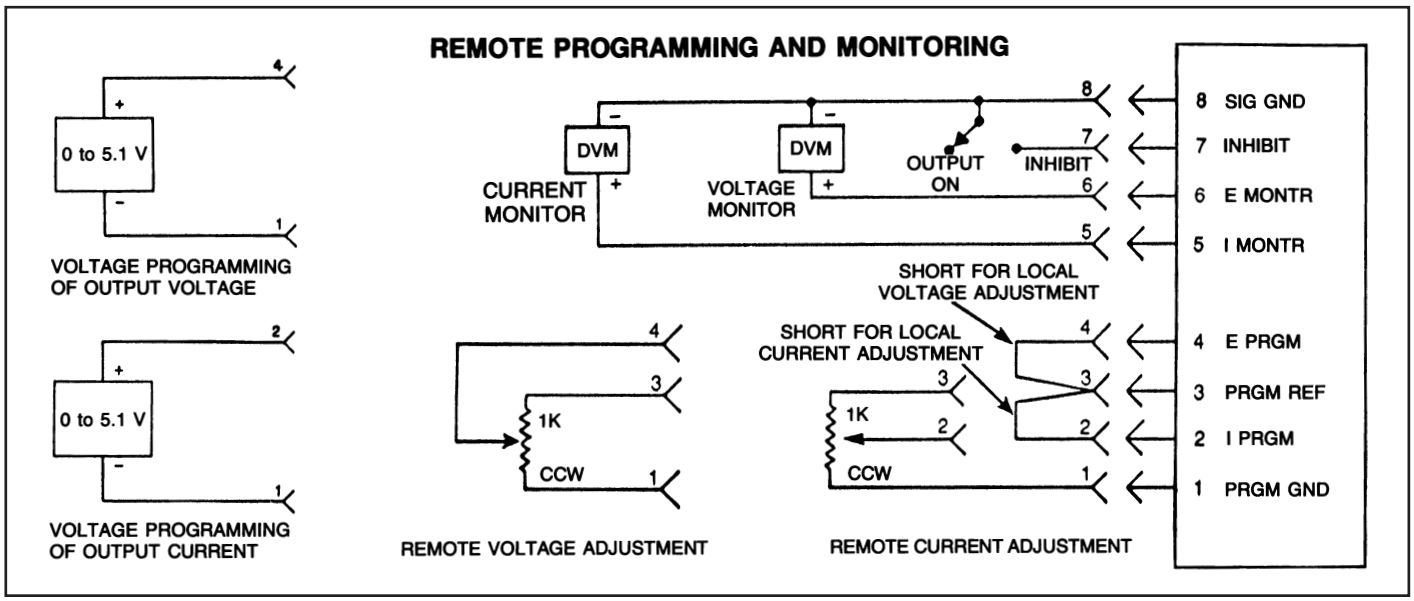
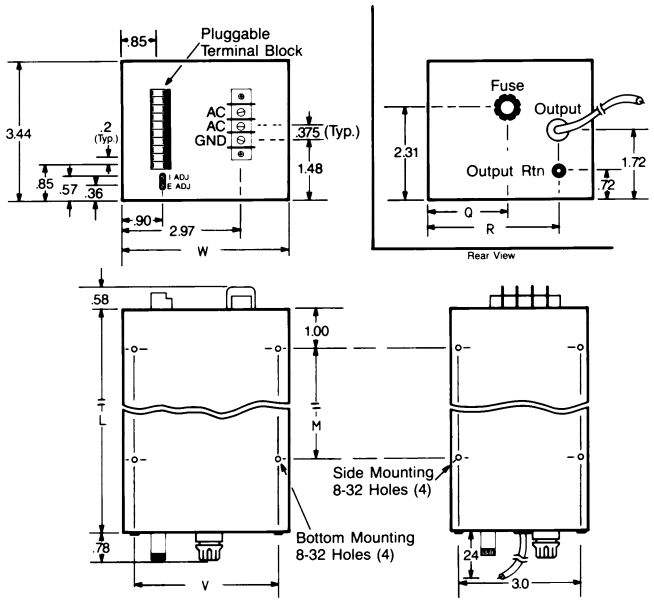


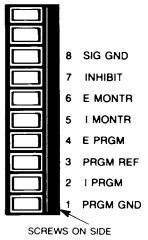
AC-DC MODELS

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

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



PLUGGABLE TERMINAL BLOCK CONNECTIONS



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.

All dimensions in inches.

High Voltage DC-DC

MODULAR
REGULATED

Output ranges:
0-1 kVdc to 0-30 kVdc

- Shipped Within 6 Days
- Five Year Warranty
  (internal encapsulated module - One Year)

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 H3.

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 on one end) instead of the flying lead. To order, add suffix letter "T" to the model number.

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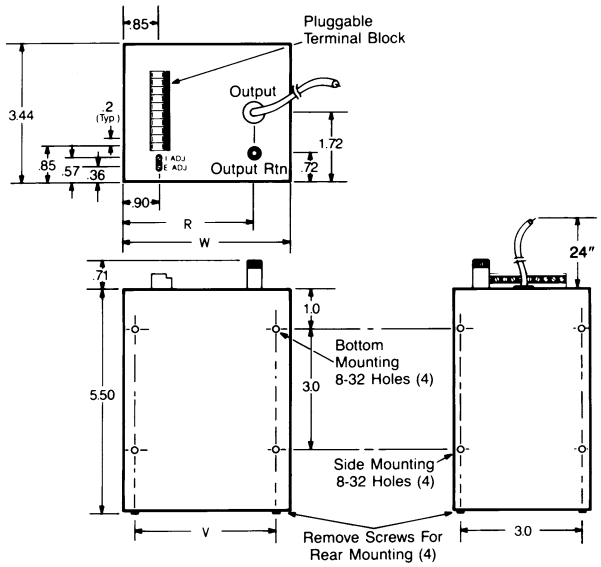
OPTIONAL OUTPUT CONNECTOR

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 on one end) instead of the flying lead. To order, add suffix letter "T" to the model number.

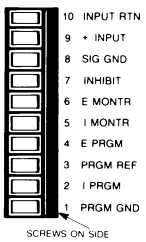
DC-DC MODELS

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

All dimensions in inches.

High Voltage AC-DC

RACK MOUNTING
REGULATED

Output ranges:
0-1 kVdc to 0-30 kVdc

- Shipped Within 9 Days
- Five Year Warranty
  (internal encapsulated module - One Year)

Ideal for laboratory and instrumentation applications, these rack mounting supplies have the same output ratings and specifications as the modular supplies shown on pages 70 and 71, 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.

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

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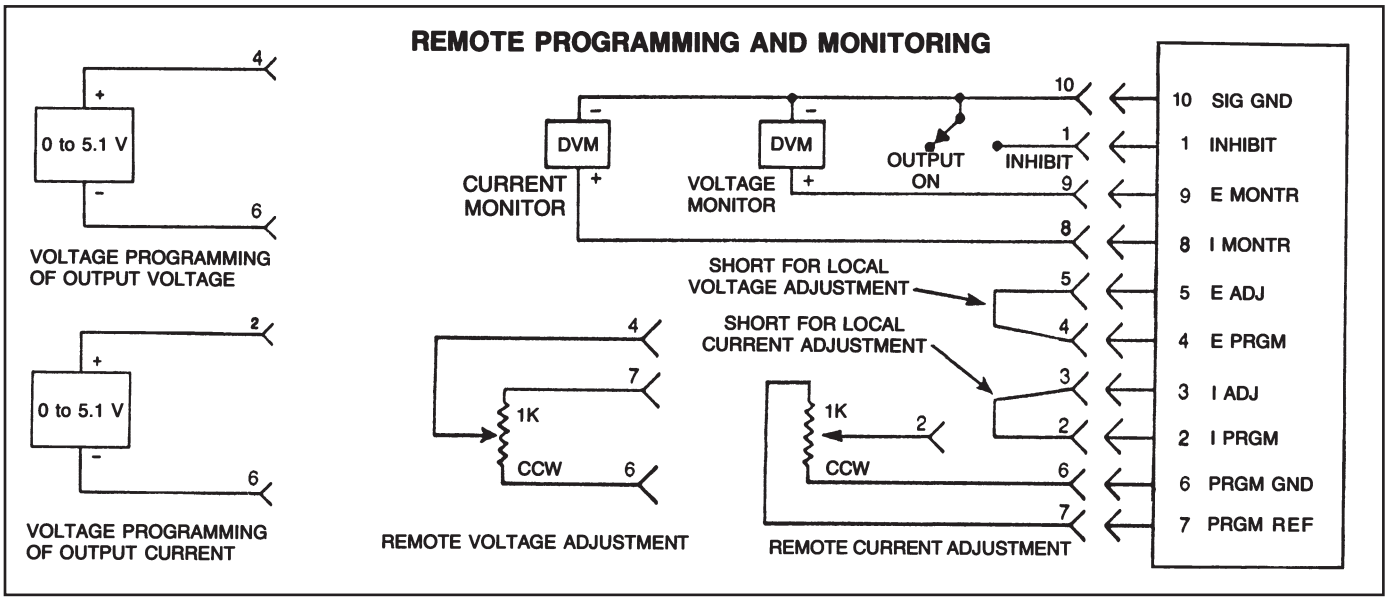
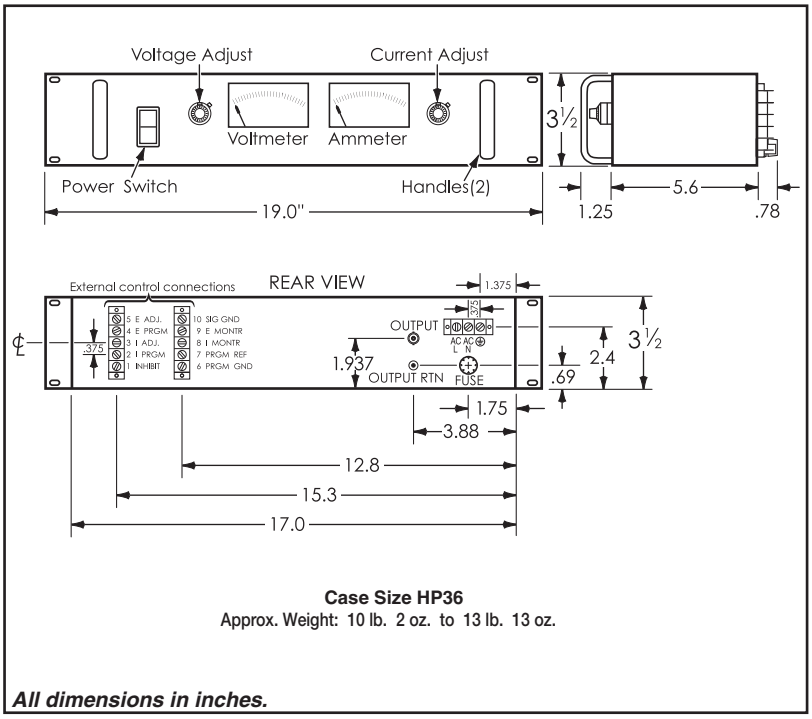


AC-DC MODELS

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

All dimensions in inches.

single output

Mini Encapsulated - PC Board mounting

LINEAR REGULATED
AC-DC

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

c UL us / CE / RoHS COMPLIANT

Conserve space with mini-modules as small as 2.3″ x 1.8″ x 1.0″. Models with outputs ranging from 1 to 75 volts, and from 30 mA to 2.5 amps are available. All feature excellent regulation and ripple parameters, and are short circuit protected. Rugged encapsulated construction and generously derated components assure years of reliable operation. PC Board mounting mini-modules are also available with dual outputs - see page H4.

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.

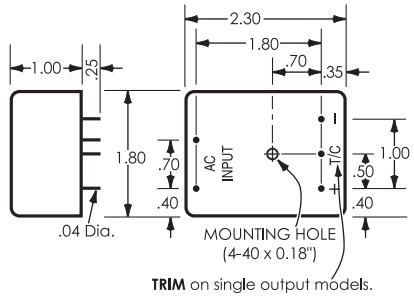
Impedance: 0.07 ohms at 1 kHz and 0.2 ohms at 10 kHz (approx.).

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 H4).

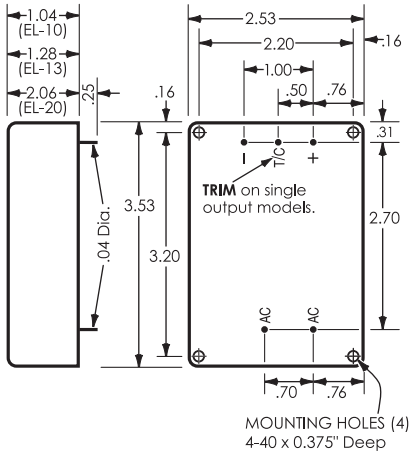
OPTIONS

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. Requires two additional days.



Case Size ES-10

All dimensions in inches.



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

All dimensions in inches.

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SINGLE OUTPUT, FOR PC BOARD MOUNTING

(For Mini Encapsulated power supplies with higher wattage outputs than those shown below, see pages C1-C2.)

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

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

*UL478 Certified only. Not CE certified.

dual tracking outputs

Mini Encapsulated - PC Board mounting

LINEAR REGULATED
AC-DC

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

cULus / CE / RoHS COMPLIANT

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

STANDARD FEATURES

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

SPECIFICATIONS

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

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

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

Polarity: Positive output, common, and negative output.

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

Storage Temperature: –55 to +85°C.

Temperature Coefficient: 10, 12 and 15 volt models, typically 0.015%/°C; 5 volt models, 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 H4).

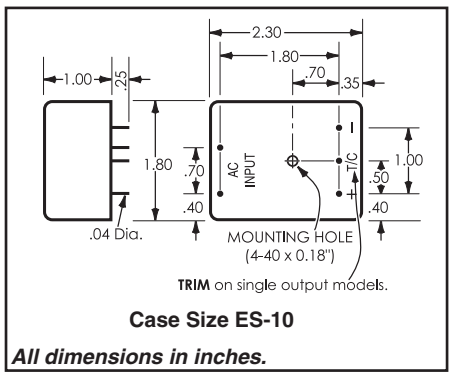
OPTIONS

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. Requires two additional days.

DUAL TRACKING OUTPUTS

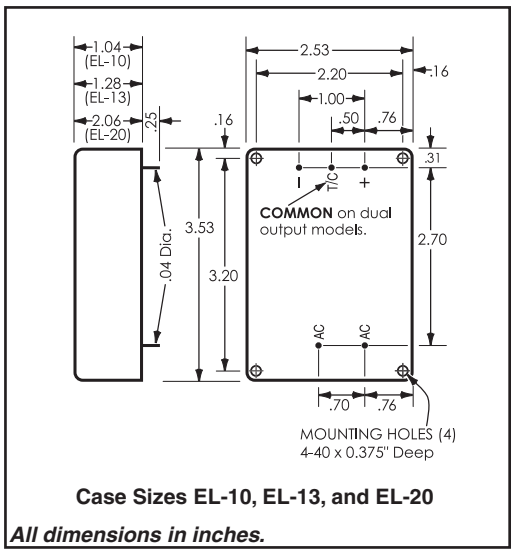
Nominal Output Voltages	Amps. per Output	Regulation Load ± %	Regulation Line ± %	Ripple mV RMS	Model	Case Size
±5	.150	.1	.05	1.5	D5-15	EL-10
±5	.250	.1	.05	1.5	D5-25	EL-10
±5	.500	.1	.05	1.5	D5-50	EL-20
±10	.200	.05	.05	1	D10-20	EL-10
±10	.300	.05	.05	1	D10-30	EL-13
±10	.400	.1	.05	1	D10-40	EL-20
±12	.025	.1	.05	1	D12-03*	ES-10
±12	.050	.1	.05	1	D12-05*	ES-10
±12	.100	.05	.05	1	D12-10A	EL-10
±12	.150	.05	.05	1	D12-15A	EL-10
±12	.200	.05	.05	1	D12-20	EL-10
±12	.300	.05	.05	1	D12-30	EL-13
±12	.350	.05	.05	1	D12-35	EL-13
±12	.500	.1	.05	1	D12-50	EL-20
±15	.025	.1	.05	1	D15-03*	ES-10
±15	.050	.1	.05	1	D15-05*	ES-10
±15	.100	.05	.05	1	D15-10A	EL-10
±15	.150	.05	.05	1	D15-15A	EL-10
±15	.200	.05	.05	1	D15-20	EL-10
±15	.300	.05	.05	1	D15-30	EL-13
±15	.350	.05	.05	1	D15-35	EL-13
±15	.500	.1	.05	1	D15-50	EL-20

*UL478 certified only. Not CE certified.



Case Size ES-10

All dimensions in inches.



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

All dimensions in inches.

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F4
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single & dual tracking outputs

Mini Encapsulated - with screw terminals

LINEAR REGULATED
AC-DC

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

c UL us / CE / RoHS COMPLIANT

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

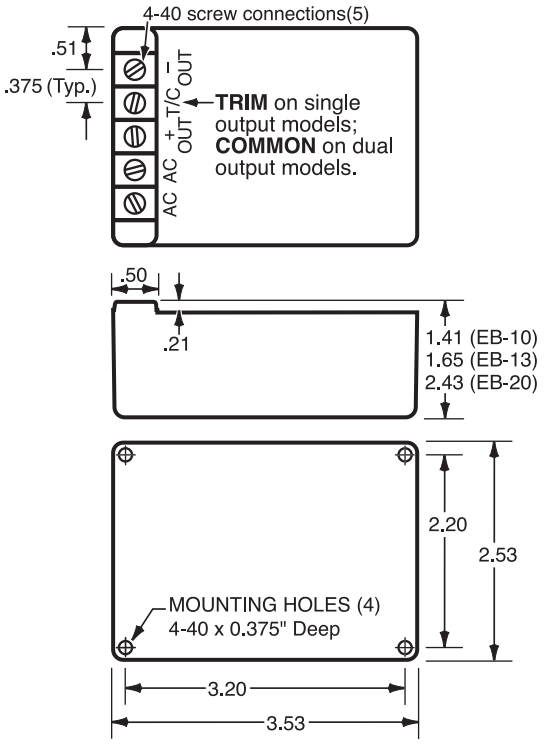
- May be used in series
- No derating or heat sinking required
- Short circuit protected
- Small, lightweight

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 H4.

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



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

All dimensions in inches.

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SINGLE OUTPUT, WITH SCREW TERMINALS

(For Mini Encapsulated power supplies with higher wattage outputs than those shown below, see pages C1-C2.)

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

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

*UL478 certified only. Not CE certified.

DUAL TRACKING OUTPUTS

Nominal Output Voltages	Amps. per Output	Regulation Load ±%	Regulation Line ±%	Ripple mV RMS	Model	Case Size
±5	.150	.1	.05	1.5	DB5-15	EB-10
±5	.250	.1	.05	1.5	DB5-25	EB-10
±5	.500	.1	.05	1.5	DB5-50	EB-20
±10	.200	.05	.05	1	DB10-20	EB-10
±10	.300	.05	.05	1	DB10-30	EB-13
±10	.400	.1	.05	1	DB10-40	EB-20
±12	.100	.05	.05	1	DB12-10	EB-10
±12	.150	.05	.05	1	DB12-15	EB-10
±12	.200	.05	.05	1	DB12-20	EB-10

Nominal Output Voltages	Amps. per Output	Regulation Load ±%	Regulation Line ±%	Ripple mV RMS	Model	Case Size
±12	.300	.05	.05	1	DB12-30	EB-13
±12	.350	.05	.05	1	DB12-35	EB-13
±12	.500	.1	.05	1	DB12-50	EB-20
±15	.100	.05	.05	1	DB15-10	EB-10
±15	.150	.05	.05	1	DB15-15	EB-10
±15	.200	.05	.05	1	DB15-20	EB-10
±15	.300	.05	.05	1	DB15-30	EB-13
±15	.350	.05	.05	1	DB15-35	EB-13
±15	.500	.1	.05	1	DB15-50	EB-20

single output

Mini Encapsulated - with touch safe terminal blocks

LINEAR REGULATED
AC-DC

- UL60950, UL508, CE Certified
- One Year Warranty

Although small in size, these mini-modules offer high performance at modest prices. All models, with series regulated outputs ranging from 3.3 to 48 volts and as high as 2.5 amps, may be mounted in an area only 3.5″ x 2.5″. Terminal block input/output connections eliminate all need for sockets or soldering and are touch safe. 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 63 Hz, single phase.

Output Voltage Setting: Outputs are factory preset to within ±2% (3.3 to 12 volt models) or ±1% (15 to 48 volt models) of the nominal output voltage.

T/C terminal: 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: Either positive or negative terminal of a single output module may be grounded.

Transient Response (NL-FL): 50 microseconds.

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

Storage Temperature: –55 to +85°C.

Humidity: 10% to 95% ≤40°C R.H. (non-condensing).

Temperature Coefficient: 0.01%/°C (Typical).

Overload/Short Circuit Protection: Momentary overload or short circuit will not damage the power supply.

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 H4.

REGULATORY COMPLIANCE

Safety: UL60950-1, 2nd Edition; UL508 17th Edition. Refer to UL File for acceptability requirements.
UL508 File: E306586
UL60950 File: E208800

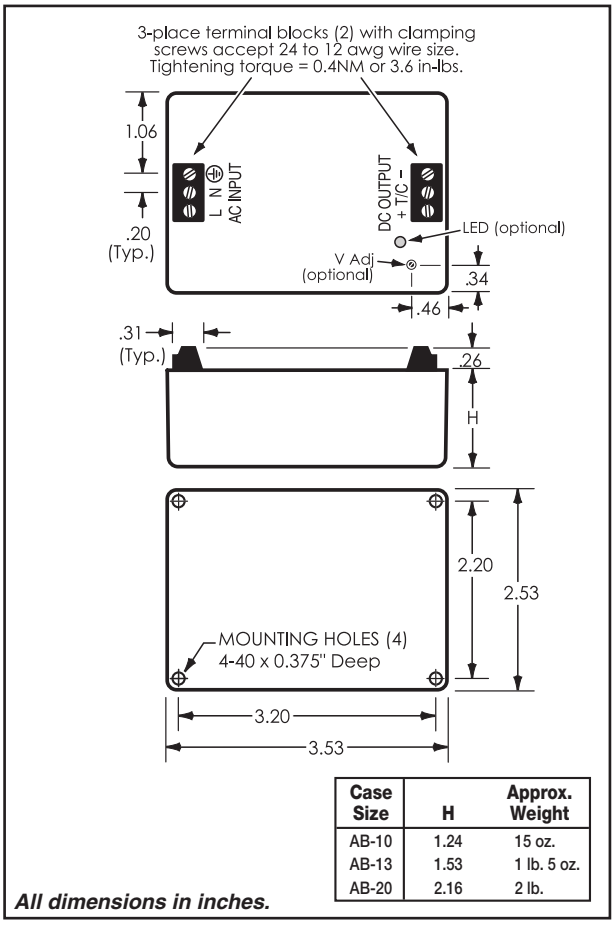
EMC: Based on testing of 115 VAC representative model. See page F8 for details.

OPTIONS

Voltage Adjust Potentiometer: Allows for adjustment range ±2% of nominal output. To order, add suffix “C1” to the model number.

Output Indicator (DC on): Green LED. To order, add suffix “G3” to the model number.

AC Input Options: All models can be alternately furnished for operation on various AC input ratings. To order, add suffix: “–230” for 230 VAC, 47-63 Hz
“–208” for 208 VAC, 47-63 Hz
“–100” for 100 VAC, 47-63 Hz
“–24” for 24 VAC, 47-63 Hz
This option requires two additional days.



Case Size	H	Approx. Weight
AB-10	1.24	15 oz.
AB-13	1.53	1 lb. 5 oz.
AB-20	2.16	2 lb.

All dimensions in inches.

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SINGLE OUTPUT, WITH TOUCH SAFE TERMINAL BLOCKS

(For Mini Encapsulated power supplies with higher wattage outputs than those shown below, see pages C1-C2.)

Nominal Output Voltage	Output Current Amps.	Regulation Load ±mV	Regulation Line ±mV	Ripple mV RMS	Model	Case Size
3.3	.500	5	5	1	3.3AB50	AB-10
3.3	1.000	5	5	1	3.3AB100	AB-13
3.3	2.000	5	5	1	3.3AB200	AB-20
5	.700	5	5	1	5AB70	AB-10
5	1.500	5	5	1	5AB150	AB-13
5	2.500	5	5	1	5AB250	AB-20
6	.550	5	5	1	6AB55	AB-10
6	1.000	5	5	1	6AB100	AB-13
6	1.750	5	5	1	6AB175	AB-20
7	.450	5	5	1	7AB45	AB-10
7	.900	5	5	1	7AB90	AB-13
7	1.150	5	5	1	7AB115	AB-20
8	.450	5	5	1	8AB45	AB-10
8	.700	5	5	1	8AB70	AB-13
8	1.100	5	5	1	8AB110	AB-20
9	.450	5	5	1	9AB45	AB-10
9	.850	5	5	1	9AB85	AB-13
9	1.500	5	5	1	9AB150	AB-20
10	.400	5	5	1	10AB40	AB-10
10	.750	5	5	1	10AB75	AB-13
10	1.200	5	5	1	10AB120	AB-20
11	.350	5	5	1	11AB35	AB-10
11	.600	5	5	1	11AB60	AB-13
11	1.000	5	5	1	11AB100	AB-20
12	.400	5	5	1	12AB40	AB-10
12	.700	5	5	1	12AB70	AB-13
12	1.200	5	5	1	12AB120	AB-20
13	.350	8	5	1	13AB35	AB-10
13	.600	8	5	1	13AB60	AB-13
13	1.000	8	5	1	13AB100	AB-20
14	.300	8	5	1	14AB30	AB-10
14	.500	8	5	1	14AB50	AB-13
14	1.000	8	5	1	14AB100	AB-20
15	.400	8	5	1	15AB40	AB-10
15	.600	8	5	1	15AB60	AB-13
15	1.000	8	5	1	15AB100	AB-20
16	.350	8	5	1	16AB35	AB-10
16	.500	8	5	1	16AB50	AB-13
16	.900	8	5	1	16AB90	AB-20
17	.330	8	5	1	17AB33	AB-10
17	.450	8	5	1	17AB45	AB-13
17	.750	8	5	1	17AB75	AB-20
18	.270	8	5	1	18AB27	AB-10
18	.400	8	5	1	18AB40	AB-13
18	.550	8	5	1	18AB55	AB-20
19	.250	8	5	1	19AB25	AB-10
19	.400	8	5	1	19AB40	AB-13
19	.700	8	5	1	19AB70	AB-20
20	.200	8	5	1	20AB20	AB-10
20	.400	8	5	1	20AB40	AB-13
20	.700	8	5	1	20AB70	AB-20
21	.180	8	5	1	21AB18	AB-10
21	.380	8	5	1	21AB38	AB-13
21	.600	8	5	1	21AB60	AB-20
22	.150	8	5	1	22AB15	AB-10
22	.300	8	5	1	22AB30	AB-13
22	.500	8	5	1	22AB50	AB-20
23	.200	8	5	1	23AB20	AB-10
23	.300	8	5	1	23AB30	AB-13
23	.600	8	5	1	23AB60	AB-20
24	.200	8	5	1	24AB20	AB-10
24	.350	8	5	1	24AB35	AB-13
24	.600	8	5	1	24AB60	AB-20
25	.190	8	5	1	25AB19	AB-10
25	.330	8	5	1	25AB33	AB-13
25	.550	8	5	1	25AB55	AB-20
26	.170	8	5	1	26AB17	AB-10
26	.300	8	5	1	26AB30	AB-13
26	.450	8	5	1	26AB45	AB-20
27	.160	8	5	1	27AB16	AB-10
27	.300	8	5	1	27AB30	AB-13
27	.500	8	5	1	27AB50	AB-20
28	.150	8	5	1	28AB15	AB-10
28	.300	8	5	1	28AB30	AB-13
28	.500	8	5	1	28AB50	AB-20

Nominal Output Voltage	Output Current Amps.	Regulation Load ±mV	Regulation Line ±mV	Ripple mV RMS	Model	Case Size
30	.130	10	5	1	30AB13	AB-10
30	.230	10	5	1	30AB23	AB-13
30	.500	10	5	1	30AB50	AB-20
32	.120	10	5	1	32AB12	AB-10
32	.220	10	5	1	32AB22	AB-13
32	.460	10	5	1	32AB46	AB-20
34	.120	10	5	1	34AB12	AB-10
34	.200	10	5	1	34AB20	AB-13
34	.440	10	5	1	34AB44	AB-20
35	.110	10	5	1	35AB11	AB-10
35	.200	10	5	1	35AB20	AB-13
35	.420	10	5	1	35AB42	AB-20
36	.110	10	5	1	36AB11	AB-10
36	.190	10	5	1	36AB19	AB-13
36	.410	10	5	1	36AB41	AB-20
38	.100	10	5	1	38AB10	AB-10
38	.180	10	5	1	38AB18	AB-13
38	.390	10	5	1	38AB39	AB-20
40	.100	10	5	1	40AB10	AB-10
40	.170	10	5	1	40AB17	AB-13
40	.370	10	5	1	40AB37	AB-20
42	.100	10	5	1	42AB10	AB-10
42	.170	10	5	1	42AB17	AB-13
42	.350	10	5	1	42AB35	AB-20
44	.090	10	5	1	44AB09	AB-10
44	.160	10	5	1	44AB16	AB-13
44	.340	10	5	1	44AB34	AB-20
45	.090	10	5	1	45AB09	AB-10
45	.160	10	5	1	45AB16	AB-13
45	.330	10	5	1	45AB33	AB-20
48	.080	10	5	1	48AB08	AB-10
48	.150	10	5	1	48AB15	AB-13
48	.310	10	5	1	48AB31	AB-20

ELECTROMAGNETIC COMPATIBILITY (EMC)

Standard:	Description:
CISPR 16-2-1	Conducted Emissions
CISPR 16-2-3	Radiated Emissions
IEC 61000-4-2	Electrostatic Discharge
IEC 61000-4-4	Electrical Fast Transient/Burst, Power Ports
IEC 61000-4-4	Electrical Fast Transient/Burst, I/O Ports
IEC 61000-4-5	Surge Immunity, I/O Ports
IEC 61000-4-8	Magnetic Immunity
IEC 61000-4-11	Voltage Dips, Interrupts and Variations

Narrow Profile
SINGLE OUTPUT
LINEAR REGULATED
AC-DC

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

RoHS COMPLIANT

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.

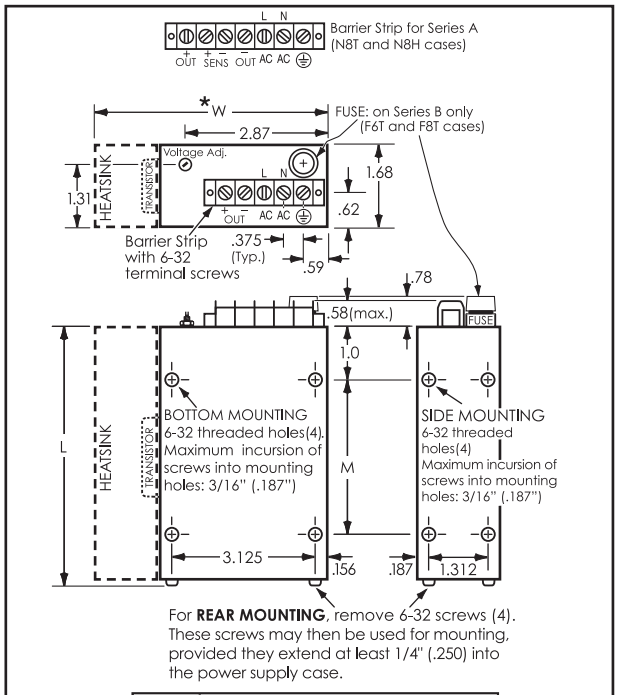
Mounting: Threaded mounting holes permit mounting to a chassis, cabinet wall or bracket, or they may be used on a test bench or tabletop. To mount from the power supply side of the mounting surface or for DIN rail mounting, see accessory Mounting Kits on page H3.

OPTIONS

Overvoltage Protection: An internal preset overvoltage protector is available. To order, add prefix "V" to the model number.

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

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. 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.

All dimensions in inches.

Online Ordering and Instant Quotes for ALL Acopian power supplies at ***www.acopian.com***
131 Loomis Street, Easton, PA 18045 • Phone: (610) 258-5441 • FAX: (610) 258-2842

NARROW PROFILE SINGLE OUTPUT

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

*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	Model	Case Size
26	1	.750	.750	.750	.1	.05	1	B26TN75	F6T
26	.5	1.25	1.25	1.25	.005	.005	.250	A26NT125	N8H
28	1	.700	.700	.700	.1	.05	1	B28TN70	F6T
28	.5	.800	.800	.800	.005	.005	.250	A28NT80	N8T
28	.5	1.25	1.25	1.25	.005	.005	.250	A28NT125	N8H
30	1	.500	.500	.500	.05	.05	1	B30TN50	F6T
30	.5	.750	.750	.750	.005	.005	.250	A30NT75	N8T
30	.5	1.1	1.1	1.1	.005	.005	.250	A30NT110	N8H
32	1	.400	.400	.400	.05	.05	1	B32TN40	F6T
32	.5	.600	.600	.600	.005	.005	.250	A32TN60	N8T
34	1	.400	.400	.400	.05	.05	1	B34TN40	F6T
34	.5	1.1	1.1	1.1	.005	.005	.250	A34NT110	N8H
35	1	.400	.400	.400	.05	.05	1	B35TN40	F6T
35	.5	.600	.600	.600	.005	.005	.250	A35TN60	N8T
35	.5	1.1	1.1	1.1	.005	.005	.250	A35NT110	N8H
36	1	.400	.400	.400	.05	.05	1	B36TN40	F6T
36	.5	.600	.600	.600	.005	.005	.250	A36TN60	N8T
36	.5	1.0	1.0	1.0	.005	.005	.250	A36NT100	N8H
38	1	.200	.200	.200	.05	.05	1	B38TN20	F6T
40	1	.400	.400	.400	.05	.05	1	B40TN40	F6T
40	.5	.750	.750	.750	.005	.005	.250	A40NT75	N8T
45	1	.400	.400	.400	.05	.05	1	B45TN40	F6T
45	.5	.600	.600	.600	.005	.005	.250	A45NT60	N8T
48	1	.400	.400	.400	.05	.05	1	B48TN40	F6T
48	.5	.500	.500	.500	.005	.005	.250	A48NT50	N8T
50	1	.400	.400	.400	.05	.05	1	B50FT40	F6T
50	1	.450	.450	.450	.005	.005	.250	A50NT45	N8T
55	1	.200	.200	.200	.05	.05	1	B55FT20	F6T
55	1	.400	.400	.400	.005	.005	.250	A55NT40	N8T
60	1	.150	.150	.150	.05	.05	1	B60FT15	F6T
60	1	.350	.350	.350	.005	.005	.250	A60NT35	N8T
65	1	.100	.100	.100	.05	.05	1	B65FT10	F6T
65	1	.250	.250	.250	.05	.05	1	B65FT25	F8T
65	1	.270	.270	.270	.005	.005	.250	A65NT27	N8T
67	1	.100	.100	.100	.05	.05	1	B67FT10	F6T
70	1	.100	.100	.100	.05	.05	1	B70FT10	F6T
70	1	.250	.250	.250	.005	.005	.250	A70NT25	N8T
75	1	.200	.200	.200	.05	.05	1	B75FT20	F8T
75	1	.250	.250	.250	.005	.005	.250	A75NT25	N8T
80	1	.100	.100	.100	.05	.05	1	B80FT10	F6T
80	1	.200	.200	.200	.05	.05	1	B80FT20	F8T
80	1	.250	.250	.250	.005	.005	.250	A80NT25	N8T
85	1	.250	.250	.250	.005	.005	.250	A85NT25	N8T
90	1	.100	.100	.100	.05	.05	1	B90FT10	F6T
90	1	.200	.200	.200	.05	.05	1	B90FT20	F8T
90	1	.250	.250	.250	.005	.005	.250	A90NT25	N8T
95	1	.200	.200	.200	.05	.05	1	B95FT20	F8T
95	1	.200	.200	.200	.005	.005	.250	A95NT20	N8T
100	1	.100	.100	.100	.05	.05	1	B100FT10	F6T
100	1	.200	.200	.200	.05	.05	1	B100FT20	F8T
100	1	.200	.200	.200	.005	.005	.250	A100NT20	N8T
110	1	.100	.100	.100	.05	.05	1	B110FT10	F6T
115	1	.100	.100	.100	.05	.05	1	B115FT10	F6T
120	1	.050	.050	.050	.05	.05	1	B120FT05	F6T
120	1	.200	.200	.200	.05	.05	1	B120FT20	F8T
120	1	.200	.200	.200	.005	.005	.250	A120NT20	N8T
125	1	.050	.050	.050	.05	.05	1	B125FT05	F6T
125	1	.200	.200	.200	.05	.05	1	B125FT20	F8T
125	1	.200	.200	.200	.005	.005	.250	A125NT20	N8T
150	1	.100	.100	.100	.05	.05	1	B150FT10	F8T
150	1	.100	.100	.100	.005	.005	.250	A150NT10	N8T

Gold Box & Narrow Profile

WIDE ADJUST OUTPUT

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

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

c UL us / CE / RoHS COMPLIANT

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. To mount from the power supply side of the mounting surface or for DIN rail mounting, see accessory Mounting Kits on page H3.

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.

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.

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

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

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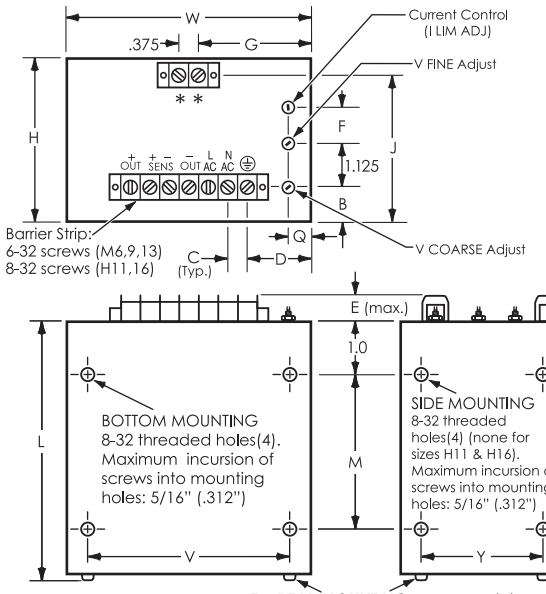
Gold Box



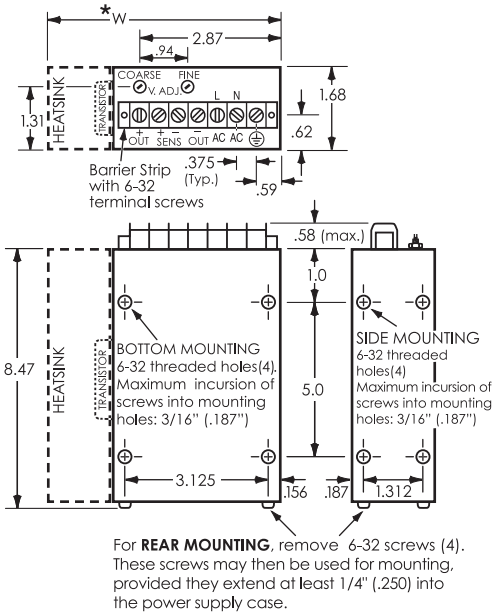
** Connections for Remote Current Control

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

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

All dimensions in inches.

Narrow Profile



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

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

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

All dimensions in inches.

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	Voltage Programmable Adjust. Current Limiting Model
0-6	1.2	1.2	1.2	820	M6	A06MX120	P06MX120
0-6	2.0	2.0	2.0	820	M6	A06MX200	P06MX200
0-6	3.0	2.5	2.0	820	M6	A06MX300	P06MX300
0-6	5.0	4.0	3.0	820	M9	A06MX500	P06MX500
0-6	8.0	7.0	6.0	820	M13	A06MX800	P06MX800
0-6	12.0	10.0	7.0	820	H11	A06HX1200	P06HX1200
0-6	16.0	13.0	10.0	820	H16	A06HX1600	P06HX1600
0-15	1.0	1.0	1.0	330	M6	A015MX100	P015MX100
0-15	2.0	1.6	1.2	330	M6	A015MX200	P015MX200
0-15	3.0	2.4	1.8	330	M9	A015MX300	P015MX300
0-15	5.0	4.0	2.5	330	M13	A015MX500	P015MX500
0-15	8.0	6.0	4.0	330	H11	A015HX800	P015HX800
0-15	10.0	8.0	6.0	330	H16	A015HX1000	P015HX1000
0-30	.50	.50	.50	160	M6	A030MX50	P030MX50
0-30	1.0	1.0	1.0	160	M6	A030MX100	P030MX100
0-30	1.6	1.4	1.2	160	M9	A030MX160	P030MX160
0-30	2.5	2.0	1.5	160	M13	A030MX250	P030MX250
0-30	4.0	3.0	2.0	160	H11	A030HX400	P030HX400
0-30	5.0	4.0	3.0	160	H16	A030HX500	P030HX500
0-50	.35	.34	.33	1000	M6	A050MX35	P050MX35
0-50	.60	.50	.40	1000	M6	A050MX60	P050MX60
0-50	.85	.75	.65	1000	M9	A050MX85	P050MX85
0-50	1.2	.96	.72	1000	M13	A050MX120	P050MX120
0-50	2.4	1.9	1.4	1000	H11	A050HX240	P050HX240
0-50	3.0	2.4	1.8	1000	H16	A050HX300	P050HX300
0-100	.10	.09	.08	500	M6	A0100MX10	P0100MX10
0-100	.25	.20	.15	500	M6	A0100MX25	P0100MX25
0-100	.45	.36	.27	500	M9	A0100MX45	P0100MX45
0-100	.60	.48	.36	500	M13	A0100MX60	P0100MX60
0-100	1.2	.96	.72	500	H11	A0100HX120	P0100HX120
0-100	1.5	1.2	.90	500	H16	A0100HX150	P0100HX150

NARROW PROFILE MODELS (for limited space applications)

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

* UL478 certified only. Not CE certified.

Gold Box

SINGLE OUTPUT

LINEAR REGULATED
AC-DC

SERIES A (High Performance)

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

c UL us / CE / RoHS COMPLIANT

SERIES A: HIGH PERFORMANCE POWER SUPPLIES

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.

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 F15 and F16. 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.

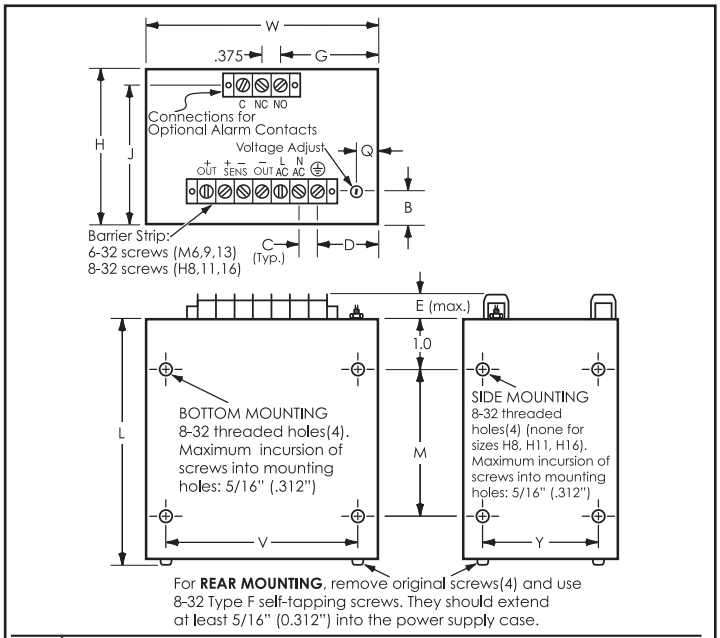
Response Time: Less than 20 microseconds.

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 H3.

OPTIONS

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

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



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

All dimensions in inches.

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

Overvoltage Protection: An internal preset overvoltage protector is available. To order, add prefix "V" to the model number.

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

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

Online Ordering and Instant Quotes for ALL Acopian power supplies at ***www.acopian.com***
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Gold Box

SINGLE OUTPUT

LINEAR REGULATED AC-DC

SERIES B (General Purpose)

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

cULus / CE / RoHS COMPLIANT

SERIES B: GENERAL PURPOSE POWER SUPPLIES

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 deratedto 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.

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 F15 and F16. 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.

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 H3.

OPTIONS

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

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

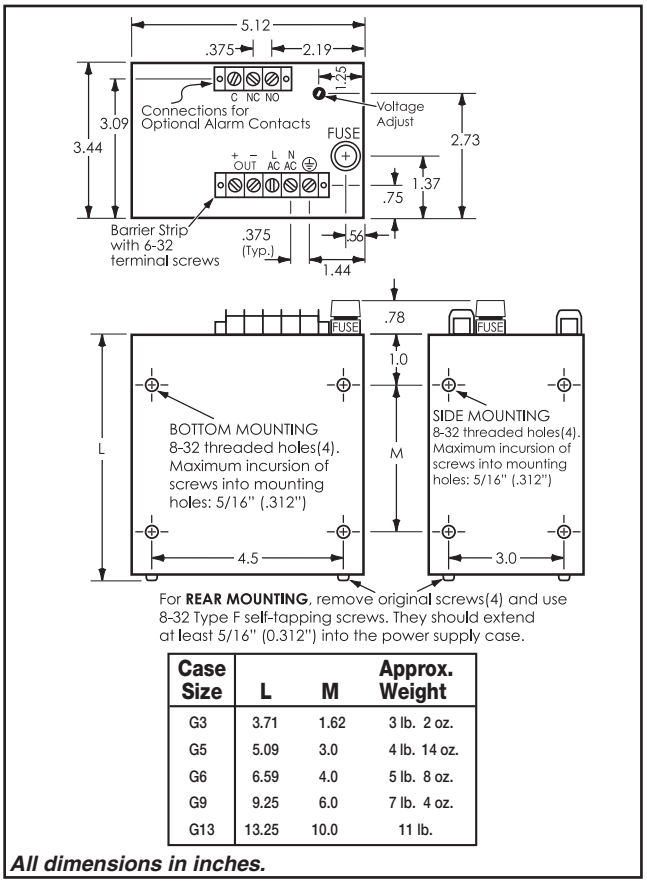
Contact ratings: 120 VAC, 8A / 60 Vdc, 1A. (To comply with SELV requirements, limit switched voltage to 60Vdc/42 VAC.) To order, add suffix "L" to model number. Models with this option are not yet UL Recognized/CE certified.

Overvoltage Protection: An internal preset overvoltage protector is available. To order, add prefix "V" to the model number.

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.

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

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. 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.

All dimensions in inches.

SERIES A & B

Nominal Output Voltage	Adjust ±V	Output Current Amps. at 40°C	55°C	71°C	Regulation Load ± %*	Line ± %*	Ripple mV RMS	Model	Case Size
1.5	.5	6.0	4.3	3.5	.005	.005	.250	A1.5MT600	M6
1.5	.5	9.0	7.2	5.5	.005	.005	.250	A1.5MT900	M9
1.5	.5	12.0	10.0	8.0	.005	.005	.250	A1.5MT1200	M13
1.5	.5	22.0	18.5	15.5	.005	.005	.250	A1.5H2200	H11
1.5	.5	32.0	27.0	22.5	.005	.005	.250	A1.5H3200	H16
2	.5	6.0	4.3	3.5	.005	.005	.250	A2MT600	M6
2	.5	12.0	10.0	8.0	.005	.005	.250	A2MT1200	M13
3	.5	.500	.500	.500	.2	.1	1	B3G50	G3
3	.5	1.2	1.1	1.0	.2	.1	1	B3G120	G3
3	.5	2.1	2.1	2.0	.5	.1	1	B3G210	G5
3	.5	4.0	3.5	3.0	.5	.1	1.5	B3G400	G6
3	.5	6.0	4.3	3.5	.005	.005	.250	A3MT600	M6
3	.5	9.0	7.2	5.5	.005	.005	.250	A3MT900	M9
3	.5	12.0	10.0	8.0	.005	.005	.250	A3MT1200	M13
3	.5	17.0	14.5	12.0	.005	.005	.250	A3H1700	H8
3	.5	20.0	16.5	13.5	.005	.005	.250	A3H2000	H11
3	.5	30.0	25.0	20.0	.005	.005	.250	A3H3000	H16
3.3	.5	.500	.500	.500	.2	.1	1	B3.3G50	G3
3.3	.5	1.2	1.1	1.0	.2	.1	1	B3.3G120	G3
3.3	.5	2.1	2.1	2.0	.5	.1	1	B3.3G210	G5
3.3	.5	4.0	3.5	3.0	.5	.1	1.5	B3.3G400	G6
3.3	.5	6.0	4.3	3.5	.005	.005	.250	A3.3MT600	M6
3.3	.5	7.0	5.9	4.9	.5	.1	1.5	B3.3G700	G9
3.3	.5	9.0	7.2	5.5	.005	.005	.250	A3.3MT900	M9
3.3	.5	12.0	10.0	8.0	.005	.005	.250	A3.3MT1200	M13
3.3	.5	17.0	14.5	12.0	.005	.005	.250	A3.3H1700	H8
3.3	.5	22.0	18.5	15.5	.005	.005	.250	A3.3H2200	H11
3.3	.5	32.0	27.0	22.5	.005	.005	.250	A3.3H3200	H16
5	.5	.500	.500	.500	.1	.1	1	B5G50	G3
5	.5	1.2	1.1	1.0	.1	.1	1	B5G120	G3
5	.5	1.7	1.5	1.3	.2	.1	1.5	B5G170	G3
5	.5	2.1	2.1	2.0	.2	.1	1.5	B5G210	G5
5	.5	4.0	3.5	3.0	.3	.1	1.5	B5G400	G6
5	.5	5.0	4.4	3.0	.4	.1	1.5	B5G500	G6
5	.5	5.1	3.6	2.6	.005	.005	.250	A5MT510	M6
5	.5	6.0	4.3	3.5	.005	.005	.250	A5MT600	M6
5	.5	8.0	7.0	5.0	.4	.1	1.5	B5G800	G9
5	.5	9.0	7.2	5.5	.005	.005	.250	A5MT900	M9
5	.5	10.0	9.0	7.0	.4	.1	1.5	B5G1000	G13
5	.5	12.0	10.0	8.0	.005	.005	.250	A5MT1200	M13
5	.5	17.0	14.5	12.0	.005	.005	.250	A5H1700	H8
5	.5	22.0	18.5	15.0	.005	.005	.250	A5H2200	H11
5	.5	32.0	27.0	22.0	.005	.005	.250	A5H3200	H16
6	1	.500	.500	.500	.1	.1	1	B6G50	G3
6	.5	1.2	1.1	1.0	.1	.1	1	B6G120	G3
6	.5	1.7	1.5	1.3	.2	.1	1.5	B6G170	G3
6	.5	3.2	3.1	3.0	.3	.1	1.5	B6G320	G6
6	.5	4.9	3.5	2.5	.005	.005	.250	A6MT490	M6
6	.5	6.0	4.5	3.5	.005	.005	.250	A6MT600	M6
6	.5	8.5	7.5	5.2	.005	.005	.250	A6MT850	M9
6	.5	11.0	9.3	7.5	.005	.005	.250	A6MT1100	M13
6	.5	16.0	13.6	11.2	.005	.005	.250	A6H1600	H8
6	.5	21.0	17.0	14.0	.005	.005	.250	A6H2100	H11
6	.5	28.0	23.0	19.0	.005	.005	.250	A6H2800	H16
7	1	.500	.500	.500	.1	.05	1	B7G50	G3
7	1	1.0	1.0	1.0	.1	.1	1	B7G100	G3
7	.5	2.0	2.0	2.0	.2	.1	1.5	B7G200	G5
7	.5	3.0	2.7	2.5	.3	.1	1.5	B7G300	G6
7	.5	5.0	4.0	3.0	.005	.005	.250	A7MT500	M6
7	.5	6.5	5.2	4.0	.4	.1	1.0	B7G650	G9
7	.5	8.0	6.5	5.0	.005	.005	.250	A7MT800	M9
7	.5	10.0	8.0	7.0	.4	.1	1.5	B7G1000	G13
7	.5	10.0	8.8	7.0	.005	.005	.250	A7MT1000	M13
8	1	.500	.500	.500	.1	.05	1	B8G50	G3
8	1	1.0	1.0	1.0	.1	.1	1	B8G100	G3
8	.5	2.0	2.0	2.0	.2	.1	1.5	B8G200	G5
8	.5	3.0	2.7	2.5	.2	.1	1.5	B8G300	G6
8	.5	5.0	4.0	3.5	.005	.005	.250	A8MT500	M6
8	.5	6.5	5.2	4.0	.3	.1	1.5	B8G650	G9
8	.5	8.0	6.5	5.0	.005	.005	.250	A8MT800	M9
8	.5	10.0	8.0	7.0	.4	.1	1.5	B8G1000	G13
8	.5	10.5	8.8	7.0	.005	.005	.250	A8MT1050	M13
8	.5	20.0	16.8	13.5	.005	.005	.250	A8H2000	H11
8	.5	28.0	23.0	19.0	.005	.005	.250	A8H2800	H16
9	1	.500	.500	.500	.1	.05	1	B9G50	G3
9	1	1.0	1.0	1.0	.1	.1	1	B9G100	G3
9	.5	2.0	2.0	2.0	.2	.1	1.5	B9G200	G5
9	.5	3.0	2.7	2.5	.2	.1	1.5	B9G300	G6
9	.5	6.5	5.2	4.0	.3	.1	1.5	B9G650	G9
9	.5	10.0	8.3	7.0	.005	.005	.250	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	Model	Case Size
10	1	.500	.500	.500	.1	.05	1	B10G50	G3
10	1	1.0	1.0	1.0	.1	.1	1	B10G100	G3
10	.5	2.0	2.0	2.0	.2	.1	1.5	B10G200	G5
10	.5	3.0	2.7	2.5	.2	.1	1.5	B10G300	G6
10	.5	4.5	3.6	2.7	.005	.005	.250	A10MT450	M6
10	.5	6.0	5.0	4.0	.3	.1	1.5	B10G600	G9
10	.5	7.5	6.0	4.5	.005	.005	.250	A10MT750	M9
10	.5	10.0	8.3	7.0	.4	.1	1.5	B10G1000	G13
10	.5	10.0	8.3	7.0	.005	.005	.250	A10MT1000	M13
10	.5	14.0	11.9	9.8	.005	.005	.250	A10H1400	H8
10	.5	18.0	15.0	12.0	.005	.005	.250	A10H1800	H11
10	.5	25.0	20.0	16.5	.005	.005	.250	A10H2500	H16
12	1	.500	.500	.500	.1	.05	1	B12G50	G3
12	1	1.0	1.0	1.0	.1	.1	1	B12G100	G3
12	.5	2.0	1.7	1.5	.2	.1	1.5	B12G200	G5
12	.5	3.0	2.7	2.5	.2	.1	1.5	B12G300	G6
12	.5	3.8	3.3	2.6	.2	.1	1.5	B12G380	G6
12	.5	4.0	3.3	2.6	.005	.005	.250	A12MT400	M6
12	.5	6.5	5.3	4.0	.3	.1	1.5	B12G650	G9
12	.5	6.5	5.3	4.0	.005	.005	.250	A12MT650	M9
12	.5	9.0	7.5	6.0	.4	.1	1.5	B12G900	G13
12	.5	9.0	7.5	6.0	.005	.005	.250	A12MT900	M13
12	.5	13.0	11.0	9.1	.005	.005	.250	A12H1300	H8
12	.5	17.0	14.3	11.5	.005	.005	.250	A12H1700	H11
12	.5	21.0	17.5	14.5	.005	.005	.250	A12H2100	H16
13	1	.500	.500	.500	.1	.05	1	B13G50	G3
13	1	1.5	1.4	1.3	.1	.1	1.5	B13G150	G3
13	.5	2.0	2.0	2.0	.2	.1	1.5	B13G200	G5
13	.5	3.0	2.7	2.5	.2	.1	1.5	B13G300	G6
13	.5	3.5	3.0	2.5	.005	.005	.250	A13MT350	M6
13	.5	5.0	4.5	4.0	.2	.1	1.5	B13G500	G9
13	.5	8.0	7.5	7.0	.3	.1	1.5	B13G800	G13
13	.5	8.0	7.5	7.0	.005	.005	.250	A13MT800	M13
14	1	.500	.500	.500	.1	.05	1	B14G50	G3
14	1	1.5	1.4	1.3	.1	.1	1.5	B14G150	G3
14	.5	2.0	2.0	2.0	.2	.1	1.5	B14G200	G5
14	.5	3.0	2.7	2.5	.2	.1	1.5	B14G300	G6
14	.5	3.0	2.7	2.5	.005	.005	.250	A14MT300	M6
14	.5	5.0	4.5	4.0	.2	.1	1.5	B14G500	G9
14	.5	7.0	6.5	6.0	.3	.1	1.5	B14G700	G13
14	.5	8.0	7.5	7.0	.005	.005	.250	A14MT800	M13
15	1	.750	.750	.750	.1	.1	1	B15G75	G3
15	1	1.0	1.0	1.0	.1	.1	1	B15G100	G3
15	1	1.5	1.4	1.3	.1	.1	1.5	B15G150	G3
15	.5	2.0	1.7	1.5	.1	.1	1.5	B15G200	G5
15	.5	3.0	2.8	2.5	.1	.1	1.5	B15G300	G6
15	.5	3.0	2.8	2.5	.005	.005	.250	A15MT300	M6
15	.5	4.2	3.8	3.0	.15	.1	1.5	B15G420	G9
15	.5	5.5	4.7	4.0	.005	.005	.250	A15MT550	M9
15	.5	6.0	5.0	4.0	.2	.1	1.5	B15G600	G9
15	.5	7.0	6.0	5.0	.2	.1	1.5	B15G700	G13
15	.5	8.0	6.5	5.5	.005	.005	.250	A15MT800	M13
15	.5	11.5	9.7	8.0	.005	.005	.250	A15H1150	H8
15	.5	15.0	12.8	10.5	.005	.005	.250	A15H1500	H11
15	.5	19.0	16.3	13.5	.005	.005	.250	A15H1900	H16
16	1	.300	.300	.300	.05	.05	1	B16G30	G3
16	.5	1.0	1.0	1.0	.1	.1	1	B16G100	G3
16	.5	3.0	2.5	2.0	.15	.1	1	B16G300	G9
16	.5	5.0	5.0	5.0	.2	.1	1.5	B16G500	G9
16	.5	6.5	6.0	5.5	.005	.005	.250	A16MT650	M13
18	1	.300	.300	.300	.05	.05	1	B18G30	G3
18	1	.750	.750	.750	.1	.1	1	B18G75	G3
18	.5	1.1	1.1	1.0	.1	.1	1	B18G110	G5
18	.5	2.1	2.0	1.8	.1	.1	1	B18G210	G5
18	.5	2.1	2.1	2.0	.005	.005	.250	A18MT210	M6
18	.5	3.0	2.8	2.5	.15	.1	1	B18G300	G9
18	.5	4.5	4.0	3.5	.005	.005	.250	A18MT450	M9
18	.5	6.5	6.0	5.5	.005	.005	.250	A18MT650	M13
18	.5	14.0	12.0	10.0	.005	.005	.250	A18H1400	H11
18	.5	18.0	15.5	13.0	.005	.005	.250	A18H1800	H16
20	1	.300	.300	.300	.05	.05	1	B20G30	G3
20	1	.750	.750	.750	.1	.05	1	B20G75	G3
20	1	1.1	1.1	1.0	.1	.1	1	B20G110	G5
20	.5	1.7	1.7	1.5	.1	.1	1.5	B20G170	G5
20	.5	2.0	2.0	2.0	.005	.005	.250	A20MT200	M6
20	.5	2.7	2.0	1.2	.15	.1	1.5	B20G270	G6
20	.5	4.0	3.5	3.0	.005	.005	.250	A20MT400	M9
20	.5	5.0	5.0	5.0	.15	.1	1.5	B20G500	G13
20	.5	6.0	5.5	5.0	.005	.005	.250	A20MT600	M13
20	.5	9.5	8.0	6.6	.005	.005	.250	A20H950	H8
20	.5	13.0	11.3	9.5	.005	.005	.250	A20H1300	H11
20	.5	16.0	14.0	12.0	.005	.005	.250	A20H1600	H16

*or 2 mv, whichever is greater

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SERIES A & B

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

Nominal Output Voltage	Adjust ±V	Output Current Amps. at 40°C	55°C	71°C	Regulation Load ± %	Line ± %	Ripple mV RMS	Model	Case Size
48	1	.200	.200	.200	.05	.05	1	B48GT20	G3
48	1	.400	.400	.400	.05	.05	1	B48GT40	G3
48	1	.600	.600	.600	.1	.1	1	B48GT60	G5
48	1	1.1	1.0	.600	.1	.1	1.5	B48GT110	G6
48	1	1.2	1.0	.800	.005	.005	.250	A48MT120	M6
48	1	1.8	1.6	1.2	.005	.005	.250	A48MT180	M9
48	1	3.0	2.6	2.1	.005	.005	.250	A48MT300	M13
48	1	6.0	5.0	4.0	.005	.005	.250	A48HT600	H11
48	1	8.5	7.2	5.5	.005	.005	.250	A48HT850	H16
50	1	.400	.400	.400	.05	.05	1	B50GT40	G3
50	1	.500	.500	.500	.05	.05	1	B50GT50	G5
50	1	1.0	.800	.700	.005	.005	.250	A50MT100	M6
50	1	1.5	1.3	1.0	.005	.005	.250	A50MT150	M9
50	1	2.7	2.3	1.8	.005	.005	.250	A50MT270	M13
50	1	6.0	5.0	4.0	.005	.005	.250	A50HT600	H11
50	1	8.0	6.6	5.2	.005	.005	.250	A50HT800	H16
55	1	.500	.500	.500	.05	.05	1	B55GT50	G5
60	1	.200	.200	.200	.05	.05	1	B60GT20	G3
60	1	.300	.300	.300	.05	.05	1	B60GT30	G3
60	1	.400	.400	.400	.05	.05	1	B60GT40	G5
60	1	.850	.720	.600	.005	.005	.250	A60MT85	M6
60	1	1.2	1.0	.800	.005	.005	.250	A60MT120	M9
60	1	2.5	2.1	1.7	.005	.005	.250	A60MT250	M13
60	1	5.0	4.1	3.3	.005	.005	.250	A60HT500	H11
60	1	7.0	5.8	4.6	.005	.005	.250	A60HT700	H16
65	1	.300	.300	.300	.05	.05	1	B65GT30	G3
70	1	.100	.100	.100	.05	.05	1	B70GT10	G3
70	1	.300	.300	.300	.05	.05	1	B70GT30	G3
75	1	.050	.050	.050	.05	.05	1	B75GT05	G3
75	1	.200	.200	.200	.05	.05	1	B75GT20	G3
75	1	.600	.500	.400	.005	.005	.250	A75MT60	M6
75	1	1.0	.830	.660	.005	.005	.250	A75MT100	M9
75	1	2.0	1.8	1.5	.005	.005	.250	A75MT200	M13
75	1	4.0	3.3	2.6	.01	.01	1	A75HT400	H11
75	1	5.6	4.6	3.6	.01	.01	1	A75HT560	H16
80	1	.100	.100	.100	.05	.05	1	B80GT10	G3
80	1	.200	.200	.200	.05	.05	1	B80GT20	G3
85	1	.200	.200	.200	.05	.05	1	B85GT20	G3
90	1	.200	.200	.200	.05	.05	1	B90GT20	G3
90	1	.500	.400	.300	.005	.005	.250	A90MT50	M6
90	1	.800	.700	.600	.005	.005	.250	A90MT80	M9
90	1	1.5	1.3	1.0	.005	.005	.250	A90MT150	M13
90	1	3.3	2.7	2.1	.01	.01	1	A90HT330	H11
90	1	4.4	3.6	2.9	.01	.01	1	A90HT440	H16
95	1	.200	.200	.200	.05	.05	1	B95GT20	G3
100	1	.100	.100	.100	.05	.05	1	B100GT10	G3
100	1	.200	.200	.200	.05	.05	1	B100GT20	G3
100	1	.460	.460	.340	.1	.1	1.5	B100GT46	G6
100	1	.650	.650	.650	.1	.1	1.5	B100G65	G6
100	1	.700	.600	.500	.005	.005	.250	A100M70	M6
100	1	1.3	1.2	1.0	.005	.005	.250	A100MT130	M13
100	1	3.0	2.5	2.0	.01	.01	1	A100HT300	H11
100	1	4.0	3.3	2.6	.01	.01	1	A100HT400	H16
110	1	.200	.200	.200	.05	.05	1	B110GT20	G3
120	1	.100	.100	.100	.05	.05	1	B120GT10	G3
120	1	.200	.200	.200	.05	.05	1	B120GT20	G3
120	1	.400	.400	.300	.1	.1	1.5	B120GT40	G6
120	1	.550	.550	.550	.1	.1	1.5	B120G55	G6
120	1	.600	.500	.400	.005	.005	.250	A120M60	M6
120	1	1.2	1.1	1.0	.005	.005	.250	A120MT120	M13
120	1	2.5	2.0	1.6	.01	.01	1	A120HT250	H11
120	1	3.5	2.9	2.3	.01	.01	1	A120HT350	H16
125	1	.200	.200	.200	.05	.05	1	B125GT20	G3
125	1	.400	.400	.300	.1	.1	1.5	B125GT40	G6
125	1	.500	.400	.300	.005	.005	.250	A125MT50	M6
125	1	.550	.550	.550	.1	.1	1.5	B125G55	G6
125	1	1.2	1.1	1.0	.005	.005	.250	A125MT120	M13
125	1	2.5	2.0	1.6	.01	.01	1	A125HT250	H11
125	1	3.5	2.9	2.3	.01	.01	1	A125HT350	H16
130	1	.200	.200	.200	.05	.05	1	B130GT20	G3
135	1	.200	.200	.200	.05	.05	1	B135GT20	G3
140	1	.200	.200	.200	.05	.05	1	B140GT20	G3
150	1	.100	.100	.100	.05	.05	1	B150GT10	G3
150	1	.200	.200	.200	.05	.05	1	B150GT20	G3
150	1	.320	.320	.250	.1	.1	1.5	B150GT32	G6
150	1	.420	.420	.420	.1	.1	1.5	B150GT42	G9
150	1	1.0	.900	.800	.005	.005	.250	A150MT100	M13
150	1	3.0	2.5	2.0	.01	.01	1	A150HT300	H16
200	1	.100	.100	.100	.1	.05	1.5	B200GT10	G3

Gold Box & Narrow Profile

DUAL TRACKING OUTPUTS

LINEAR REGULATED
AC-DC

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

cULus / CE / RoHS COMPLIANT

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 F18 for case dimensions.

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 H3.

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.

Terminal Strip Cover: Clips on. To order, add suffix "M".

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. 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	Model	Case Size
±5	.5	.750	.650	.550	TD5-75	TG5
±5	.5	1.5	1.25	1.0	TD5-150	TG6
±5	.5	2.5	2.0	1.5	TD5-250	TG9
±12	1	1.0	.900	.800	TD12-100	TG5
±12	1	1.6	1.4	1.0	TD12-160	TG6
±12	1	2.5	2.0	1.5	TD12-250	TG9
±12	.5	4.5	3.7	3.0	TD12-450	TG13
±12	.5	8.5	7.0	5.5	TD12-850	TH11
±15	1	.400	.400	.400	TD15-40	TG5
±15	1	1.0	.900	.800	TD15-100	TG5
±15	1	1.6	1.4	1.0	TD15-160	TG6
±15	1	2.5	2.0	1.5	TD15-250	TG9
±15	.5	4.5	3.7	3.0	TD15-450	TG13
±15	.5	8.5	7.0	5.5	TD15-850	TH11

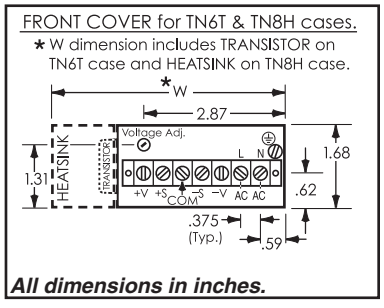
FRONT COVER CONNECTIONS:
(See page F18 for complete drawing.)

NARROW PROFILE MODELS
(for limited space applications)

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

* Not CE certified.

See page F18 for complete drawing.



All dimensions in inches.

Gold Box

DUAL ISOLATED OUTPUTS (User-selectable)

LINEAR REGULATED
AC-DC

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

RoHS COMPLIANT

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.

HOW TO ORDER: Select two **sections** (from the same table) on pages F19 and F20. 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.)

SPECIFICATIONS

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

Output Specifications: See pages 64 and 65.

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 H3.

OPTIONS

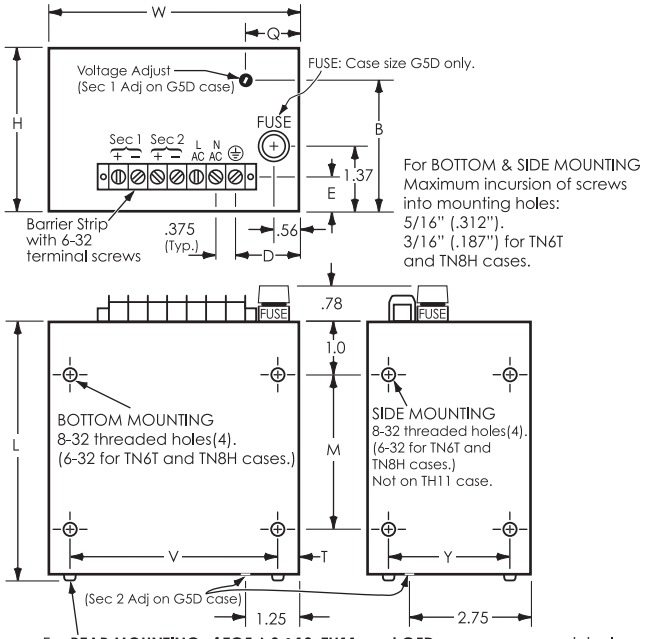
Overvoltage Protection: Two separate, preset overvoltage protection circuits, one for each output. To order, add prefix "V" to model number.

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

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

Dual Tracking & Dual Isolated Case Sizes:

(on page F17) (on page F18)



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.

All dimensions in inches.

* see page F17 for front cover drawing.

DUAL OUTPUT (User-selectable)

(OUTPUTS TO 500 MA)

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

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

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DUAL OUTPUT (User-selectable)

(OUTPUTS TO 2 AMPS.)

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

(90 TO 150 VOLTS)

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

Gold Box

DUAL ISOLATED OUTPUTS
(5v/12v combinations)

LINEAR REGULATED
AC-DC

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

c UL us / CE / RoHS COMPLIANT

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.

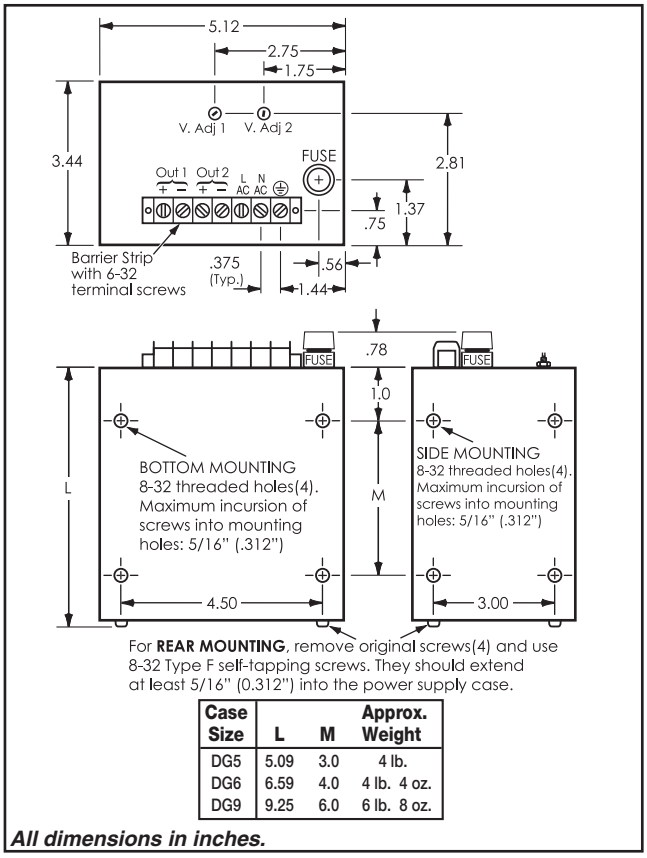
Mounting: Threaded mounting holes permit mounting to a chassis, cabinet wall or bracket. To mount from the power supply side of the mounting surface or for DIN rail mounting, see accessory Mounting Kits on page H3.

OPTIONS

Overvoltage Protection: Two separate, preset overvoltage protection circuits, one for each output. To order, add prefix "V" to model number.

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

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



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.

All dimensions in inches.

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

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Gold Box

TRIPLE ISOLATED OUTPUTS

LINEAR REGULATED
AC-DC

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

c UL us / CE / RoHS COMPLIANT

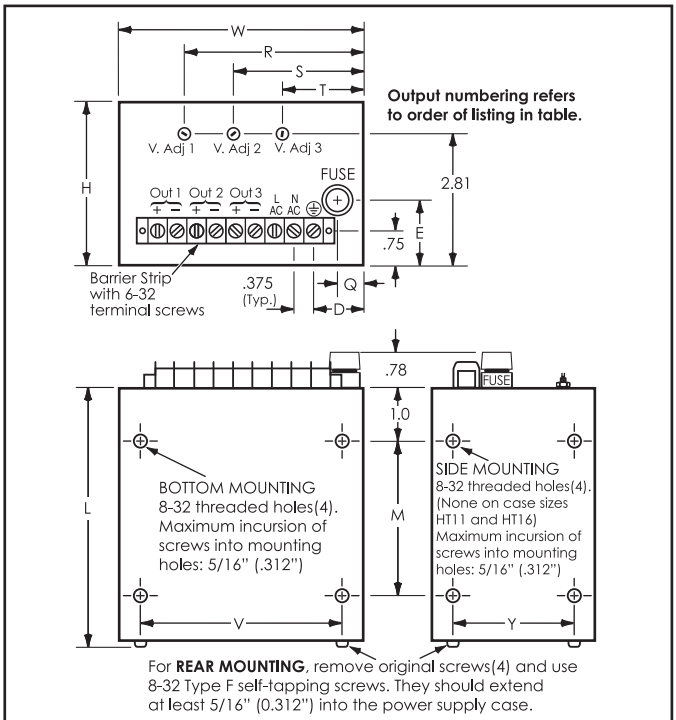
Triple isolated output power supplies provide the features and characteristics of three supplies in one compact, easy-to-use package. They are available in the voltage combinations most frequently required for driving microprocessors and associated circuitry.

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 H3.

OPTIONS

Overvoltage Protection: Separate overvoltage protection circuit on each output. Add prefix "3V" to model number.
Terminal Strip Cover: Clips on. To order, add suffix "M" to model number.
230 Volt Input: Add suffix "–230" to the model number. Requires two additional days.



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.

All dimensions in inches.

Nominal Output Voltages	Adjust Range ± V	Output Current Amps.	Regulation Load ± %	Regulation Line ± %	Ripple mV RMS	Model	Case Size
5 5 12	.25 .25 1	3.0 1.0 .600	.15 .15 .15	.15 .15 .15	1 1 1	5512T6A	GT6
5 5 12	.25 .25 1	6.0 2.0 1.2	.15 .15 .15	.15 .15 .15	1 1 1	5512T9A	GT9
5 9 12	.25 1 1	6.0 1.4 1.2	.15 .15 .15	.15 .15 .15	1 1 1	5912T9A	GT9
5 12 12	.25 1 1	2.0 .300 .300	.15 .15 .15	.15 .15 .15	1 1 1	51212T5A	GT5
5 12 12	.25 1 1	3.0 .600 .600	.15 .15 .15	.15 .15 .15	1 1 1	51212T6A	GT6
5 12 12	.25 1 1	6.0 1.2 1.2	.15 .15 .15	.15 .15 .15	1 1 1	51212T9A	GT9
5 12 12	.25 1 1	8.0 1.3 1.3	.15 .15 .15	.15 .15 .15	1 1 1	51212T13A	GT13
5 12 12	.5 1 1	15.0 2.0 2.0	.15 .15 .15	.15 .15 .15	1 1 1	51212T11A	HT11

Nominal Output Voltages	Adjust Range ± V	Output Current Amps.	Regulation Load ± %	Regulation Line ± %	Ripple mV RMS	Model	Case Size
5 12 12	.5 1 1	20.0 3.0 3.0	.15 .15 .15	.15 .15 .15	1 1 1	51212T16A	HT16
5 15 15	.25 1 1	2.0 .250 .250	.15 .15 .15	.15 .15 .15	1 1 1	51515T5A	GT5
5 15 15	.25 1 1	3.0 .500 .500	.15 .15 .15	.15 .15 .15	1 1 1	51515T6A	GT6
5 15 15	.25 1 1	6.0 1.0 1.0	.15 .15 .15	.15 .15 .15	1 1 1	51515T9A	GT9
5 15 15	.25 1 1	8.0 1.1 1.1	.15 .15 .15	.15 .15 .15	1 1 1	51515T13A	GT13
5 15 15	.5 1 1	15.0 1.5 1.5	.15 .15 .15	.15 .15 .15	1 1 1	51515T11A	HT11
5 15 15	.5 1 1	20.0 2.5 2.5	.15 .15 .15	.15 .15 .15	1 1 1	51515T16A	HT16

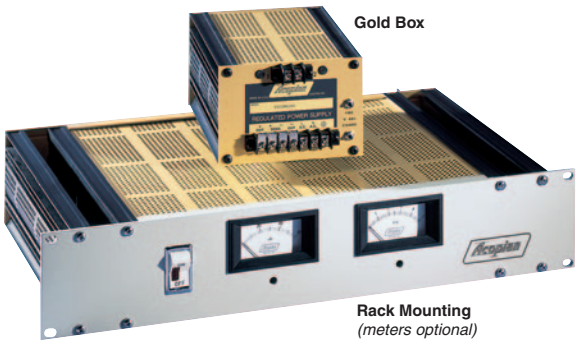
Gold Box & Rack Mounting

WIDE ADJUST OUTPUT PROGRAMMABLE (with a control voltage or a potentiometer)

LINEAR REGULATED
AC-DC

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

RoHS COMPLIANT (Gold Box models)



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 +10Vdc. 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 H3.

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.

Terminal Strip Cover: Clips on. To order, add suffix “M” to model number.

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. The “–230” option requires two additional days.

Ammeter (Rack Mounting models): Add suffix “A” to model number.

Voltmeter (Rack Mounting models): Add suffix “F” to model number.

Handles (Rack Mounting models): Add suffix “H” to model number.

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.

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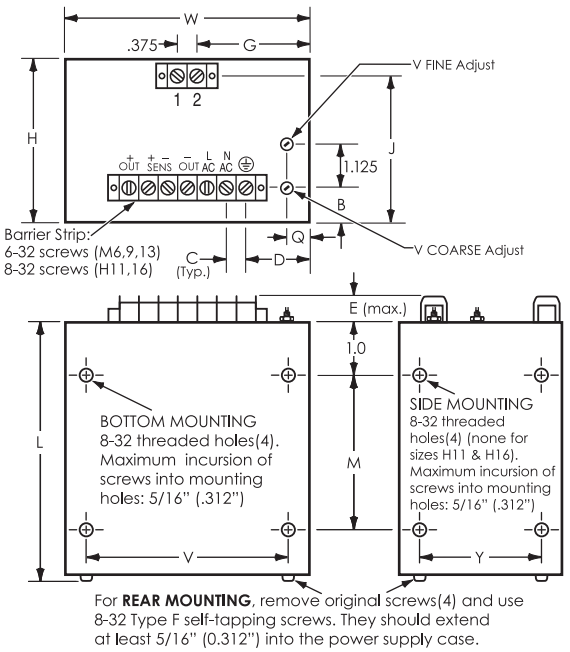
Gold Box



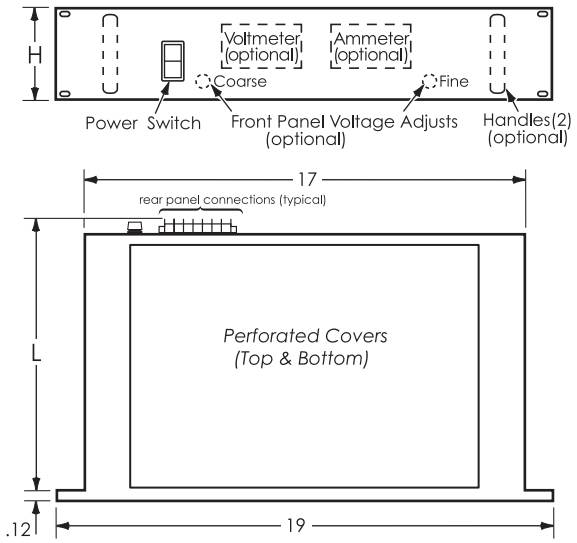
Case Size	L	W	H	M	V	Y	E	Q	B	C	D	G	J	Approx. Weight
M6	6.59	5.12	3.44	4.0	4.5	3.0	.58	.5	.75	.375	1.44	2.37	3.09	5 lb. 10 oz.
M9	9.25	5.12	3.44	6.0	4.5	3.0	.58	.5	.75	.375	1.44	2.37	3.09	6 lb. 7 oz.
M13	13.25	5.12	3.44	10.0	4.5	3.0	.58	.5	.75	.375	1.44	2.37	3.09	8 lb. 8 oz.
H11	11.25	7.37	5.12	8.0	6.75	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.

All dimensions in inches.

GOLD BOX MODELS

Output Voltage Range	Output Current Amps. at 40°C	55°C	71°C	Case Size	Model
0-6	1.2	1.2	1.2	M6	Y06MX120
0-6	2.0	2.0	2.0	M6	Y06MX200
0-6	3.0	2.5	2.0	M6	Y06MX300
0-6	5.0	4.0	3.0	M9	Y06MX500
0-6	8.0	7.0	6.0	M13	Y06MX800
0-6	12.0	10.0	7.0	H11	Y06HX1200
0-6	16.0	13.0	10.0	H16	Y06HX1600
0-15	1.0	1.0	1.0	M6	Y015MX100
0-15	2.0	1.6	1.2	M6	Y015MX200
0-15	3.0	2.4	1.8	M9	Y015MX300
0-15	5.0	4.0	2.5	M13	Y015MX500
0-15	8.0	6.0	4.0	H11	Y015HX800
0-15	10.0	8.0	6.0	H16	Y015HX1000
0-30	.50	.50	.50	M6	Y030MX50
0-30	1.0	1.0	1.0	M6	Y030MX100
0-30	1.6	1.4	1.2	M9	Y030MX160
0-30	2.5	2.0	1.5	M13	Y030MX250
0-30	4.0	3.0	2.0	H11	Y030HX400
0-30	5.0	4.0	3.0	H16	Y030HX500
0-50	.35	.34	.33	M6	Y050MX35
0-50	.60	.50	.40	M6	Y050MX60
0-50	.85	.75	.65	M9	Y050MX85
0-50	1.2	.96	.72	M13	Y050MX120
0-50	2.4	1.9	1.4	H11	Y050HX240
0-50	3.0	2.4	1.8	H16	Y050HX300
0-100	.10	.09	.08	M6	Y0100MX10
0-100	.25	.20	.15	M6	Y0100MX25
0-100	.45	.36	.27	M9	Y0100MX45
0-100	.60	.48	.36	M13	Y0100MX60
0-100	1.2	.96	.72	H11	Y0100HX120
0-100	1.5	1.2	.90	H16	Y0100HX150

Rack Mounting



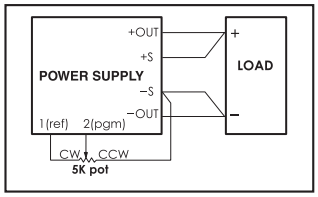
Case Size	H	L	Approx. Weight
3P11	3½″	10¾″	16 lb.
3P17	3½″	17″	26 lb.
5P12	5¼″	11⅞″	20 lb.
5P17	5¼″	16⅞″	30 lb.

All dimensions in inches.

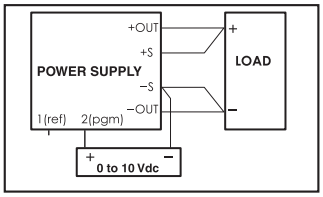
RACK MOUNTING MODELS

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

PROGRAMMING



..with a Potentiometer



..with a Control Voltage

Gold Box Infinity Power Supplies

LINEAR REGULATED (to 150 watts)

AC-DC

single output & wide adjust output

- UL60950, UL508, CE Certified
- Shipped Within 6 Days
- Five Year Warranty

c UL us / CE / RoHS COMPLIANT / c UL us LISTED

STANDARD FEATURES

- Highly configurable, with a seemingly *Infinite* number of options
- Any slot voltage from 1.5v to 150v is available
- Remote Sensing
- Open Sense protection
- Isolated output
- Short circuit and overload protection with enhanced surge capabilities
- No minimum load required
- Internal EMI filtering
- Pluggable connectors
- Can be mounted on two surfaces in any orientation

SPECIFICATIONS

Input Voltage: 105-125 VAC, 50-420 Hz, single phase. (100-132 VAC, 60Hz with 30% derating.)

AC Input Current (maximum): 1.3A (LM6A case), 2A (LM8A case), 3A (LM10A case).

Internal Failure Protection: Provided by internal fuse.

Input Undervoltage: An input of less than 105 VAC will not damage power supply.

Regulation, Ripple (in constant voltage mode):
See tables on pages F32 and F33.

Regulation, Ripple (in constant current mode):
(Wide Adjust Output models)
Line Regulation: ±0.01% or 2 mA, whichever is greater.
Load Regulation: ±0.01% or 2 mA, whichever is greater.
Current Ripple: 0.25% rms.

Start-up Time: 75 to 150 ms.

Start-up Surge: 15% overcurrent for 500ms surge capability (Single Output models).

Turn-off: Exponentially decays to zero.

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%.

Short Circuit and Overload Protection: A short or overload forces the power supply into foldback protection, (Single Output models) or into constant current mode (Wide Adjust Output models), with automatic recovery.

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

Storage Temperature: –55 to +85°C.

Temperature Coefficient (after 30 minute warm-up):
Voltage mode; ±0.01%/°C (typical).
Current mode (Wide Adjust models); ±0.005%/°C (typical).

Altitude rating: Operation to 10,000 ft and storage to 40,000 ft.

Polarity: Output is floating; either positive or negative terminal may be grounded or floated up to 300 volts above ground. Optional controls and monitors are referenced to the negative terminal.

Drift, Warm-up (first 30 minutes after turn-on, @ 25°C):
Voltage mode; ±0.03% or 5 mV, whichever is greater.
Current mode (Wide Adjust models); ±0.01% or 10 mA, whichever is greater.

Drift, Long Term (@ 25°C):
Voltage mode; ±0.01% or 5 mV, whichever is greater, over 8 hours.
Voltage mode; ±0.015% or 10 mV, whichever is greater, over 1000 hours.
Current mode (Wide Adjust models); ±0.01% or 5 mA, whichever is greater, over 8 hours.
Current mode (Wide Adjust models); ±0.02% or 10 mA, whichever is greater, over 1000 hours.

Remote Sensing: Provision for sensing the output voltage across the load, so that drops in the load line are compensated, is a standard feature. Compensates up to 0.5 Vdc drop per output line (or within the limits of the output voltage adjustment range). (Wide Adjust Output models compensate up to 0.5 Vdc drop per output line.)

Output Voltage Adjustment: Screwdriver accessible through the front panel.

Dielectric Withstand Voltage		Isolation
Input to output:	4242 Vdc	1000 Vdc
Input to case:	2121 Vdc	500 VAC
Output to case:	750 Vdc	300 VAC

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

Mounting: Threaded mounting holes permit mounting to a chassis, cabinet wall or bracket. To mount from the power supply side of the mounting surface use Mounting Kit GB8 or GBR. For DIN rail mounting use Mounting Kit LH35DIN, LR35DIN, or LV35DIN. See accessory Mounting Kits on page H3.

REGULATORY COMPLIANCE

Safety: UL60950-1, 2nd Edition; UL508 17th Edition. Refer to UL File for acceptability requirements.
UL508 File: E306586
UL60950 File: E208800

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Gold Box Infinity Power Supplies

OPTIONS

A1-A4; Overvoltage Protection Options

Choose one: A1 or A2 or A3 or A4

A1; OVP set 15% above maximum rated output. Non-latching. (Available on Single Output models only. Not available with option C9.)

A2; OVP set 15% above maximum rated output. Latching. Includes latching overcurrent option C9. Reset by momentarily removing AC input power. (Available on Single Output models only.)

A3; OVP adjustable from Vout minimum to 15% higher than the maximum rated output voltage. Non-latching. Screwdriver adjustment accessible through the top panel. (Available on Single Output models only.)

A4; OVP tracks as Vout is adjusted; OVP triggers between 1v minimum above Vout to 15% above Vout. Latching. (Available on Wide Adjust Output models only.)

B1-B2; IEC AC Input Connector Options

Choose one: B1 or B2

B1; IEC inlet on the rear, with accessible fuse. (Not available with options B6, K5, L2 or on case size LM6A.)

B2; IEC inlet on the front, with accessible fuse. (Not available with options B5, B6, C8, E6, K5, L2.)

K3; 6' IEC AC input Cord 115 VAC

K4; 6' IEC AC input Cord 230 VAC

B3-B6,L1-L3; AC Input Voltage Options

Choose one: B3 or B4 or B5 or B6 or L1 or L2 or L3

B3; 210-250 VAC input. Internally fused for a single phase source.

B4; 105-125 VAC or 210-250 VAC input, selectable with switch on rear. Internally fused for a single phase source. (Not available with options B5, B9, K5 or on case size LM6A.)

B5; 105-125 VAC or 210-250 VAC input, selectable with switch on front. Internally fused for a single phase source. (Not available with option B2, B4, B8, C8, E6.)

B6; 105-125 VAC or 210-250 VAC strappable input. External fusing required.

Input voltage of 115 or 230 VAC can be selected by the use of jumpers on a 4 place pluggable terminal block located on the front panel. (Not available with options B1, B2, B3, B8, C8, E6, K5.)

L1; 90-110 VAC input. Internally fused for a single phase source. (Add 5 days to standard shipping time.) (Not available with option C8)

L2; 22-26 VAC input. Internally fused for a single phase source. (Add 5 days to standard shipping time.) (Not available with options B1, B2, B8, B9, C8, E6, K7.)

L3; 195-220 VAC input. Internally fused for a single phase source. (Add 5 days to standard shipping time.) (Not available with options C8, E6.)

B8-B9; Power Switch Options

Choose one: B8 or B9

B8; AC on/off rocker switch on front panel. (Not available with options B5, B6, C8, E6, L2.)

B9; AC on/off rocker switch on rear panel. (Not available with options B4, E6, L2 or on case size LM6A.)

C1-C2; Voltage Output Adjust and Current Limit Adjust Options

(standard: screwdriver slot accessible through the front panel for Vout adjust.)

Choose one: C1 or C2

C1; Front panel knobs; (one for voltage, one for current) used to adjust output voltage and current.
Current adjustment range is same as for option C2. (Available on Wide Adjust Output models only.)

C2; Current Limit adjustment screwdriver slot accessible through the front panel.
Single Output models; current adjustment range is ±10% of maximum rated output current.
Wide Adjust Output models; current adjustment range is from zero to maximum rated output current.

C3-C4; Inhibit or Enable Options

Choose one: C3 or C4

C3; Inhibit control, TTL compatible. To disable the supply, apply a voltage between the “Rtn” terminal and the “Inh/Ena” terminal. The voltage can be any value from +3 Vdc to +15 Vdc.

C4; Enable Control, TTL compatible. To enable the DC output, the “Inh/Ena” terminal must either be shorted to the “Rtn” terminal or pulled to within 0.8 Vdc of the “Rtn” terminal. An open collector or contact closure can be used.

Gold Box Infinity Power Supplies

OPTIONS (continued)

C5-C6; Output Programming Options (Wide Adjust models only) (voltage and/or current)

Choose one: C5 or C6

C5; The output voltage and current may be programmed from 0 to full rating by means of control voltage inputs of 0 to +5 Vdc.

C6; The output voltage and current may be programmed from 0 to full rating by means of control voltage inputs of 0 to +10 Vdc.

Voltage mode accuracy: 0.5%. Current mode accuracy: 0.5% or ±15 mA, whichever is greater. Accuracy percentages do not apply below 5% of output rating.

C7; Voltage and Current Monitoring

For models with no programming or with 0-10v programming (option "C6"):

Voltage Monitor Terminal: Permits remote monitoring of output voltage, stepped down by a ratio of 10:1 (for 3.3v to 90v models) or 100:1 (for 100v to 150v models). Accuracy is 0.5% of maximum rated output voltage.

Current Monitor Terminal: For models with greater than 10 amps output current: permits remote monitoring of output current, stepped down by a ratio of 100 mV/Amp (accuracy is 1% of maximum rated output current). For models with less than 10 amps output current: permits remote monitoring of output current, stepped down by a ratio of 1000 mV/Amp. (Accuracy is 1% of maximum rated output current or ±15 mA, whichever is greater.)

For models with 0-5v programming (option "C5"):

Voltage Monitor Terminal: Permits remote monitoring of output voltage, stepped down by a ratio of 10:1 (for 3.3v to 45v models) or 100:1 (for 48v to 150v models). Accuracy is 0.5% of maximum rated output voltage.

Current Monitor Terminal: For models with greater than 45 amps output current: permits remote monitoring of output current, stepped down by a ratio of 10 mV/Amp. For models with from 5 amps to 45 amps output current: permits remote monitoring of output current, stepped down by a ratio of 100 mV/Amp. For models with less than 4.5 amps output current: permits remote monitoring of output current, stepped down by a ratio of 1000 mV/Amp. (Accuracy is 1% of maximum rated output current or ±15 mA, whichever is greater.)

(When monitoring the output voltage and/or current by means of the monitor terminals, the use of an instrument having an input impedance of at least 10 megohms is recommended.)

C8; AC on/off control

Apply control voltage between terminals 21 and 22 to turn power supply on. Control voltage range is 11 to 28 Vdc (@ 65 mA maximum). (Not available with options B2, B5, B6, B8, E6, K7, L2.)

C9; Latching Overcurrent control

If current is greater than 15% of the maximum rated output current, the power supply latches off. Reset by momentarily removing AC input power. This option is included with Option A2. (Available on Single Output models only. Not available with option A1.)

D1; Over Temperature protection

An internal thermostat will automatically shut down the power supply in the event of an over temperature condition. Power supply resets automatically.

D2; Thermostatically controlled fan

Fan remains off until forced-air cooling is required.

E1; Output blocking protection diode

Used for battery charging or redundant applications. Derate output by 10%.

E2; Transient protection for electrically noisy environments

Transient protection for AC input and DC output.

E3; High Frequency pulsed load filtering

Recommended for applications such as "switched loads" and "stepper motors".

E4; Series Operation Diode

Allows power supplies to operate in series, for applications requiring higher output voltage.

E5; High Isolation Output

May be floated at 1000 Vdc above case.

(Available only on Single Output models with no options or with options B1-B9, D1, D2, F1, K6.)

E6; AC Inrush Current Limiting

AC inrush is limited by a 10 ohm impedance. (Not available with options B2, B5, B6, B8, C8, L2.)

Gold Box Infinity Power Supplies

OPTIONS (continued)

F1; Table top rubber feet

Alarm with Relay Contacts Options (Single Output models only)
Choose one: G1 or G2
G1; NC Relay contacts close when output voltage drops more than 10% below nominal.
G2; NO Relay contacts open when output voltage drops more than 10% below nominal.

G3; Status LEDs on Front Cover
Green LED indicates Vout is between -10% and +15% of rated output.
Red LED indicates a fault condition; thermal (for units with option D1), overcurrent, under or overvoltage.
(Available on Single Output models only.)

G4; 'Voltage output OK' Monitor
TTL High when Vout is between -10% and +15% of rated output. (Available on Single Output models only.)

G5; Temperature monitor
The temperature monitor is used to measure the power supply's internal temperature. Monitor output voltage is set to 2.5 Vdc at 25°C and varies above or below this value by 0.1 Vdc per °C. For example, if the temperature is 20°C the output will be 2 Vdc. (Not available with options H1-H8).

H1-H8; Additional Low Current Auxiliary Voltage Options
<1% initial Accuracy, ±0.5% Line and ±0.5% Load Regulation, <10mV peak-to-peak ripple. (Not available with option G5.)
Choose one: H1 or H2 or H3 or H4 or H5 or H6 or H7 or H8

H1; Auxiliary output:	3.3 Vdc, 0.1 amp
H2; Auxiliary output:	5 Vdc, 0.1 amp
H3; Auxiliary output:	12 Vdc, 0.1 amp
H4; Auxiliary output:	13.8 Vdc, 0.1 amp
H5; Auxiliary output:	15 Vdc, 0.1 amp
H6; Auxiliary output:	-5 Vdc, 0.1 amp
H7; Auxiliary output:	-12 Vdc, 0.1 amp
H8; Auxiliary output:	-15 Vdc, 0.1 amp

J3; Redundancy ('OR-ing' or 'Blocking Diode')
Redundancy is attained by simply wiring two units in parallel. Derate output by 10%.
(Available on Single Output models only. Not available with options A2, A3, G2, E5.)
Includes:
- Non-latching OVP set 15% above rated output (Option A1).
- Alarm with relay contacts that close when output voltage drops more than 10% below nominal (Option G1).
- Output blocking protection diode (Option E1).
- Remote sensing.

K3; 6' IEC AC input Cord 115 VAC

K4; 6' IEC AC input Cord 230 VAC

K5; Rear Panel AC input fuse (Not available with option B1, B2, B4, B6 or on case size LM6A.)

K6; Final Test Data
Final test data also includes an extended 8 hour burn-in. (Add 2 days to standard shipping time.)

K7; AC on/off LED on Front Cover (Not available with option L2.)
Red LED indicates AC is on.

L1-L3; see B3 thru B6 (that section includes L1, L2 and L3, which follows B3 thru B6.)

Gold Box Infinity Power Supplies

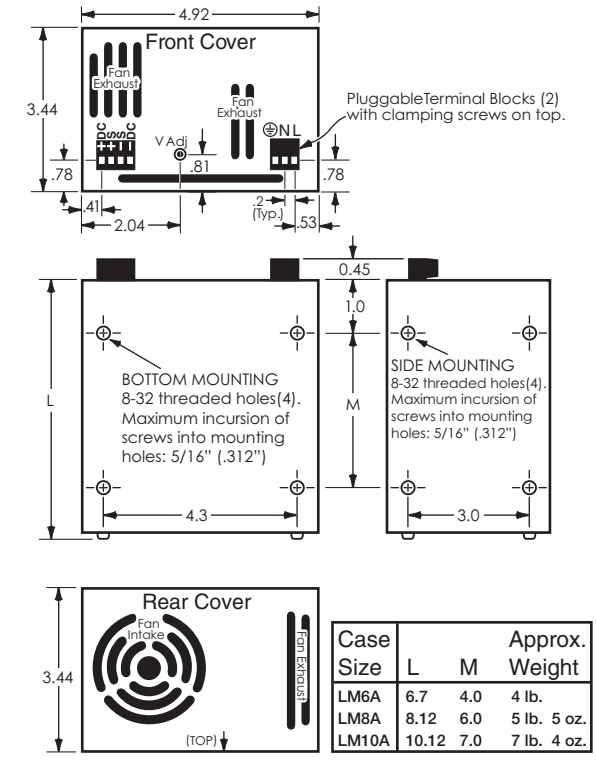
How to Order:

There are a seemingly infinite number of options available for the Acopian Gold Box Infinity power supplies! And even more options will be available soon! This guide should make it easy to select the model that you desire.

Add options as a suffix to the power supply model number. For example, if options **C3** and **C9** are selected, the suffix on the model number is ***C39***, denoting options **C3** and **C9**.

For example, power supply model L5MC500 with options **A1**, **B6**, **C3** and **C9**:
This model number would be L5MC500***A1B6C39***.

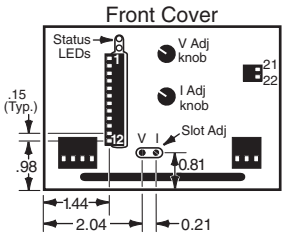
Base model drawing



Case Size	L	M	Approx. Weight
LM6A	6.7	4.0	4 lb.
LM8A	8.12	6.0	5 lb. 5 oz.
LM10A	10.12	7.0	7 lb. 4 oz.

All dimensions in inches.

Available options drawing



All dimensions in inches.

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SINGLE OUTPUT MODELS

---------- Any other voltage between 1.5 and 150 can easily be made. ----------

Nominal Output Voltage	Adjust Range ± V	Output Current Amps. at 40°C	Output Current Amps. at 71°C	Regulation Load ±mv	Regulation Line ±mv	Ripple mV (@ 25 MHz BW) RMS	Ripple mV (@ 25 MHz BW) P-P	Model	Case Size
1.5	0.5	5	3.5	2	2	0.25	0.75	L1.5MC500	LM6A
1.5	0.5	10	7	2	2	0.25	0.75	L1.5MC1000	LM8A
1.5	0.5	13.2	9.2	2	2	0.25	0.75	L1.5MC1320	LM10A
3.3	0.5	5	3.5	2	2	0.25	0.75	L3.3MC500	LM6A
3.3	0.5	10	7	2	2	0.25	0.75	L3.3MC1000	LM8A
3.3	0.5	13.2	9.2	2	2	0.25	0.75	L3.3MC1320	LM10A
5	0.5	5	3.5	2	2	0.25	0.75	L5MC500	LM6A
5	0.5	10	7	2	2	0.25	0.75	L5MC1000	LM8A
5	0.5	13.2	9.2	2	2	0.25	0.75	L5MC1320	LM10A
6	0.5	5	3.5	2	2	0.25	0.75	L6MC500	LM6A
6	0.5	10	7	2	2	0.25	0.75	L6MC1000	LM8A
6	0.5	13.2	9.2	2	2	0.25	0.75	L6MC1320	LM10A
7	0.5	5	3.5	2	2	0.25	0.75	L7MC500	LM6A
7	0.5	10	7	2	2	0.25	0.75	L7MC1000	LM8A
7	0.5	13.2	9.2	2	2	0.25	0.75	L7MC1320	LM10A
8	0.5	5	3.5	2	2	0.25	0.75	L8MC500	LM6A
8	0.5	10	7	2	2	0.25	0.75	L8MC1000	LM8A
8	0.5	13.2	9.2	2	2	0.25	0.75	L8MC1320	LM10A
10	0.5	4.7	3.3	2	2	0.25	0.75	L10MC470	LM6A
10	0.5	8.5	6	2	2	0.25	0.75	L10MC850	LM8A
10	0.5	12	8.4	2	2	0.25	0.75	L10MC1200	LM10A
12	1	4.5	3.2	2	2	0.25	0.75	L12MC450	LM6A
12	1	7.2	5	2	2	0.25	0.75	L12MC720	LM8A
12	1	10	7	2	2	0.25	0.75	L12MC1000	LM10A
13.8	1	4	2.8	2	2	0.25	0.75	L13.8MC400	LM6A
13.8	1	6.3	4.4	2	2	0.25	0.75	L13.8MC630	LM8A
13.8	1	8.7	6	2	2	0.25	0.75	L13.8MC870	LM10A
15	1	3.1	2.2	2	2	0.25	0.75	L15MC310	LM6A
15	1	6.1	4.2	2	2	0.25	0.75	L15MC610	LM8A
15	1	9.4	6.5	2	2	0.25	0.75	L15MC940	LM10A
16	1	2.9	2	2	2	0.25	0.75	L16MC290	LM6A
16	1	5.7	4	2	2	0.25	0.75	L16MC570	LM8A
16	1	8.8	6.2	2	2	0.25	0.75	L16MC880	LM10A
18	1	2.5	1.8	2	2	0.25	0.75	L18MC250	LM6A
18	1	5	3.5	2	2	0.25	0.75	L18MC500	LM8A
18	1	7.5	5.3	2	2	0.25	0.75	L18MC750	LM10A

Nominal Output Voltage	Adjust Range ± V	Output Current Amps. at 40°C	Output Current Amps. at 71°C	Regulation Load ±mv	Regulation Line ±mv	Ripple mV (@ 25 MHz BW) RMS	Ripple mV (@ 25 MHz BW) P-P	Model	Case Size
20	1	2.3	1.6	2	2	0.25	0.75	L20MC230	LM6A
20	1	4.4	3.1	2	2	0.25	0.75	L20MC440	LM8A
20	1	6.6	4.6	2	2	0.25	0.75	L20MC660	LM10A
24	1	2.3	1.6	3	3	0.25	0.75	L24MC230	LM6A
24	1	3.9	2.7	3	3	0.25	0.75	L24MC390	LM8A
24	1	6.1	4.2	3	3	0.25	0.75	L24MC610	LM10A
28	1	2	1.4	3	3	0.25	0.75	L28MC200	LM6A
28	1	3.3	2.3	3	3	0.25	0.75	L28MC330	LM8A
28	1	5.5	3.9	3	3	0.25	0.75	L28MC550	LM10A
30	1	1.9	1.3	3	3	0.25	0.75	L30MC190	LM6A
30	1	3.3	2.3	3	3	0.25	0.75	L30MC330	LM8A
30	1	5.2	3.6	3	3	0.25	0.75	L30MC520	LM10A
36	1	1.4	1	3	3	0.25	0.75	L36MC140	LM6A
36	1	2.5	1.8	3	3	0.25	0.75	L36MC250	LM8A
36	1	4.4	3.1	3	3	0.25	0.75	L36MC440	LM10A
48	1	1.3	0.9	3	3	0.25	0.75	L48MC130	LM6A
48	1	2	1.4	3	3	0.25	0.75	L48MC200	LM8A
48	1	3.3	2.3	3	3	0.25	0.75	L48MC330	LM10A
60	1	1	0.7	3	3	1	3	L60MC100	LM6A
60	1	1.5	1.1	3	3	1	3	L60MC150	LM8A
60	1	2.6	1.8	3	3	1	3	L60MC260	LM10A
75	1	0.7	0.5	5	5	1	3	L75MC70	LM6A
75	1	1.1	0.8	5	5	1	3	L75MC110	LM8A
75	1	2.2	1.5	5	5	1	3	L75MC220	LM10A
100	1	0.6	0.4	5	5	1	3	L100MC60	LM6A
100	1	0.9	0.6	5	5	1	3	L100MC90	LM8A
100	1	1.3	0.9	5	5	1	3	L100MC130	LM10A
120	1	0.6	0.4	5	5	1	3	L120MC60	LM6A
120	1	0.75	0.5	5	5	1	3	L120MC75	LM8A
120	1	1.1	0.8	5	5	1	3	L120MC110	LM10A
125	1	0.5	0.4	5	5	1	3	L125MC50	LM6A
125	1	0.7	0.5	5	5	1	3	L125MC70	LM8A
125	1	1.2	0.8	5	5	1	3	L125MC120	LM10A
150	1	0.35	0.2	5	5	1	3	L150MC35	LM6A
150	1	0.5	0.3	5	5	1	3	L150MC50	LM8A
150	1	1	0.7	5	5	1	3	L150MC100	LM10A

Gold Box Infinity Power Supplies

WIDE ADJUST OUTPUT MODELS

Output Voltage Range	Output Current Amps. at 40°C	Output Current Amps. at 71°C	Regulation Load ±mv	Regulation Line ±mv	Ripple mV (@ 25 MHz BW) RMS	Ripple mV (@ 25 MHz BW) P-P	Model	Case Size
0-5	3.3	2.3	2	2	0.25	0.75	YL05MC330	LM6A
0-5	5.5	3.9	2	2	0.25	0.75	YL05MC550	LM8A
0-5	8.8	6.2	2	2	0.25	0.75	YL05MC880	LM10A
0-6	2.7	1.9	2	2	0.25	0.75	YL06MC270	LM6A
0-6	4.5	3.2	2	2	0.25	0.75	YL06MC450	LM8A
0-6	8.8	6.2	2	2	0.25	0.75	YL06MC880	LM10A
0-10	3	2.1	2	2	0.25	0.75	YL010MC300	LM6A
0-10	4	2.8	2	2	0.25	0.75	YL010MC400	LM8A
0-10	7	4.9	2	2	0.25	0.75	YL010MC700	LM10A
0-12	2.5	1.8	2	2	0.25	0.75	YL012MC250	LM6A
0-12	3.5	2.5	2	2	0.25	0.75	YL012MC350	LM8A
0-12	6.8	4.8	2	2	0.25	0.75	YL012MC680	LM10A
0-16	2.2	1.5	2	2	0.25	0.75	YL016MC220	LM6A
0-16	3.3	2.3	2	2	0.25	0.75	YL016MC330	LM8A
0-16	5.5	3.9	2	2	0.25	0.75	YL016MC550	LM10A
0-20	1.7	1.2	2	2	0.25	0.75	YL020MC170	LM6A
0-20	2.6	1.8	2	2	0.25	0.75	YL020MC260	LM8A
0-20	4.2	2.9	2	2	0.25	0.75	YL020MC420	LM10A
0-24	1.5	1.1	3	3	0.25	0.75	YL024MC150	LM6A
0-24	2.3	1.6	3	3	0.25	0.75	YL024MC230	LM8A
0-24	3.5	2.5	3	3	0.25	0.75	YL024MC350	LM10A
0-25	1.4	1	3	3	0.25	0.75	YL025MC140	LM6A
0-25	2.2	1.5	3	3	0.25	0.75	YL025MC220	LM8A
0-25	3.4	2.4	3	3	0.25	0.75	YL025MC340	LM10A
0-30	1.1	0.8	3	3	0.25	0.75	YL030MC110	LM6A
0-30	1.8	1.2	3	3	0.25	0.75	YL030MC180	LM8A
0-30	2.8	1.9	3	3	0.25	0.75	YL030MC280	LM10A
0-36	1	0.7	3	3	0.25	0.75	YL036MC100	LM6A
0-36	1.5	1.1	3	3	0.25	0.75	YL036MC150	LM8A
0-36	2.4	1.7	3	3	0.25	0.75	YL036MC240	LM10A
0-50	0.7	0.5	3	3	0.25	0.75	YL050MC70	LM6A
0-50	0.9	0.7	3	3	0.25	0.75	YL050MC90	LM8A
0-50	1.3	0.9	3	3	0.25	0.75	YL050MC130	LM10A
0-60	0.6	0.4	3	3	1	3	YL060MC60	LM6A
0-60	0.8	0.6	3	3	1	3	YL060MC80	LM8A
0-60	1.1	0.8	3	3	1	3	YL060MC110	LM10A
0-100	0.3	0.21	5	5	1	3	YL0100MC30	LM6A
0-100	0.5	0.35	5	5	1	3	YL0100MC50	LM8A
0-100	0.7	0.49	5	5	1	3	YL0100MC70	LM10A
0-150	0.15	0.11	5	5	1	3	YL0150MC15	LM6A
0-150	0.3	0.21	5	5	1	3	YL0150MC30	LM8A
0-150	0.4	0.28	5	5	1	3	YL0150MC40	LM10A

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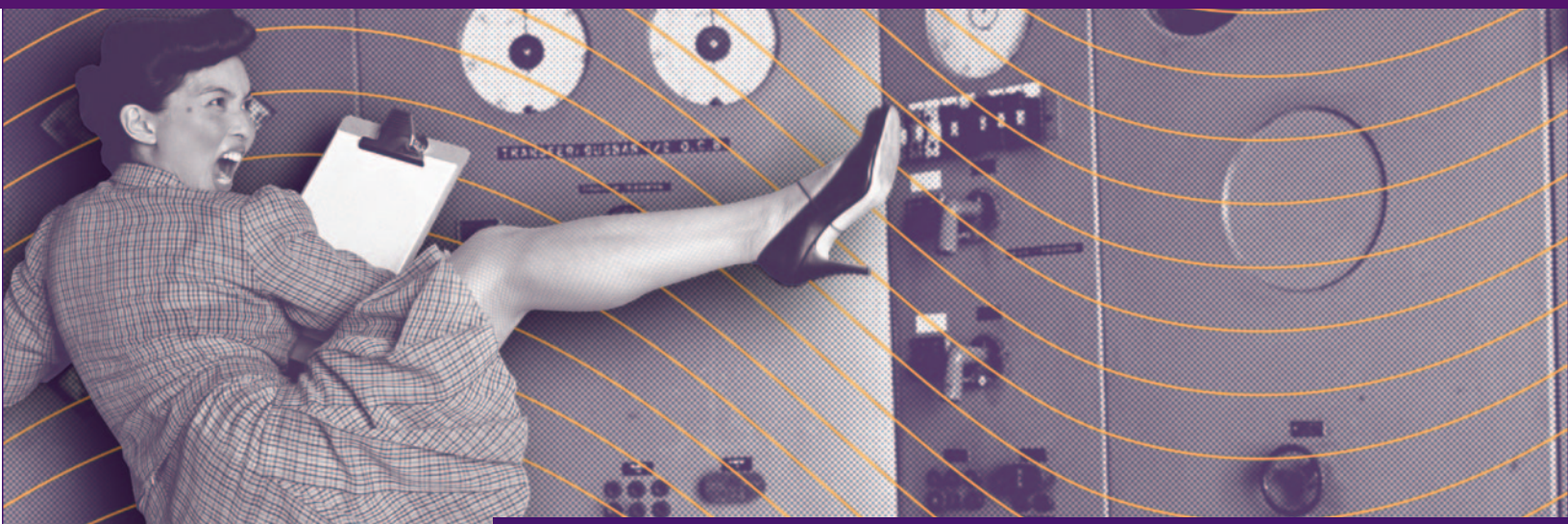

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Infinity Rack Mounting & Benchtop
LINEAR REGULATED (to 1200 watts)

AC-DC

single output & wide adjust output

(handles, meters optional)

• Five Year Warranty

STANDARD FEATURES

- Highly configurable
- Remote sensing
- Open sense protection
- Isolated output
- Internal EMI Filtering
- No minimum load required
- Front panel AC input power switch with indicator lamp
- Overtemp protection on heat sinks
- Thermostatically controlled fans
- Short circuit and overload protection with enhanced surge capabilities
- Controllable from 0v and 0 amps to rated output*
- Constant current controllable*
- Programmable voltage and current*

(*Wide adjust output models only)

SPECIFICATIONS

Input Voltage: 105-125 VAC, 50-420 Hz, single phase. (100-132 VAC, 60Hz with 30% derating.)

AC Input Current (maximum, by case size):
2U13 & 2B13: 6A
3U17 & 3B17: 15A
4U22 & 4B22: 25A

Internal Failure Protection: Provided by internal fuse or circuit breaker.

Input Undervoltage: An input of less than 105 VAC will not damage power supply.

Regulation, Ripple (in constant voltage mode):
See tables on page F37-F38.

Regulation, Ripple (in constant current mode):
(Wide Adjust Output models)
Line Regulation: ±0.01% or 2 mA, whichever is greater.
Load Regulation:
≤27A models: ±0.02% or 4 mA, whichever is greater.
≥28A models: ±0.04% or 20 mA, whichever is greater.
Current Ripple: 0.25% rms.

Start-up Time: 75 to 150 ms.

Turn-off: Exponentially decays to zero.

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

Short Circuit and Overload Protection: A short or overload forces the power supply into foldback protection (Single Output models), or into constant current mode (Wide Adjust Output models), with automatic recovery.

Ambient Operating Temperature: –20 to +71°C. (Derate 1%/°C above 40°C.)

Storage Temperature: –55 to +85°C.

Temperature Coefficient (after 30 minute warm-up):
Voltage mode; ±0.01%/°C (typical).
Current mode; ±0.05%/°C (typical).

Altitude Rating: Operation to 10,000 ft and storage to 40,000 ft.

Polarity: Output is floating; either positive or negative terminal may be grounded or floated up to 300 volts above ground. Optional controls and monitors are referenced to the negative terminal.

Drift, Warm-up (first 30 minutes after turn-on, @ 25°C):
Voltage mode; ±0.1% or 10 mV, whichever is greater.
Current mode (Wide Adjust models);
≤27A models: ±0.2% or 50 mA, whichever is greater.
≥28A models: ±0.3% or 75 mA, whichever is greater.

Drift, Long Term (@ 25°C):
Voltage mode; ±0.03% or 10 mV, whichever is greater, over 8 hours.
Voltage mode; ±0.05% or 20 mV, whichever is greater, over 1000 hours.
Current mode, over 8 hours;
≤27A models: ±0.02% or 20 mA, whichever is greater.
≥28A models: ±0.03% or 30 mA, whichever is greater.
Current mode, over 1000 hours;
≤27A models: ±0.02% or 10 mA, whichever is greater.
≥28A models: ±0.03% or 30 mA, whichever is greater.

Remote Sensing: Provision for sensing the output voltage across the load, so that drops in the load line are compensated, is a standard feature. Compensates up to 0.5 Vdc drop per output line.

Output Voltage Adjustment: Screwdriver accessible through the rear panel.

	Dielectric Withstand Voltage	Isolation
Input to output:	4242 Vdc	1000 Vdc
Input to case:	2121 Vdc	500 VAC
Output to case:	750 Vdc	300 VAC

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

Mounting: Rack Mounting models are designed expressly for mounting in standard 19″ wide RETMA cabinet racks. Benchtop models rest on four rubber feet. **Note: Slides or rear support brackets required for case size 4U22.**

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Infinity Rack Mounting & Benchtop

OPTIONS

A1,A2; Overvoltage Protection (Single Output models only)

A1; OVP set 15% above maximum rated output. Non-latching. (Not available with option C9.)
A2; OVP set 15% above rated output. Latching. Reset by momentarily removing AC input power.

B3,B4,B6,L1,L3; AC Input Voltage Options

Choose one: B3 or B4 or B6 or L1 or L3
B3; 210-250 VAC input. Internally fused for a single phase source.
B4; 105-125 VAC or 210-250 VAC input, selectable with switch on rear.
(Available with 2U13/2B13 case size models only.)
B6; 105-125 VAC or 210-250 VAC strappable input. Input voltage of 115 or 230 VAC can be selected by the use of jumpers on a 4 place pluggable terminal block located on the rear panel.
(Available with 3U17/3B17 & 4U17/4B17 case size models only. Circuit breakers and AC line filters included.)
L1; 90-110 VAC input. Internally fused for a single phase source. (Add 5 days to standard shipping time.)
L3; 195-220 VAC input. Internally fused for a single phase source. (Add 5 days to standard shipping time.)

C1-C2; Voltage Output Adjust and Current Limit Adjust Options

(standard: screwdriver slot accessible through the rear panel for Vout adjust.)
Choose one: C1 or C2 or S1
C1; Front panel knobs; (one voltage, one current) used to adjust output voltage and current.
(Current adjustment range is from zero to maximum rated output current.)
C2; Current Limit adjustment screwdriver slot accessible through the rear panel.
(Current adjustment range is from zero to maximum rated output current.)
S1; Front panel shaft locks. Provides screwdriver slot adjustment with shaft locks exerting an even frictional drag over the control shafts, resisting accidental rotation.

C3-C4; Inhibit or Enable Options

Choose one: C3 or C4
C3; Inhibit control, TTL compatible. To disable the supply, apply a voltage between the "Rtn" terminal and the "Inh/Ena" terminal. The voltage can be any value from +3 Vdc to +15 Vdc.
C4; Enable Control, TTL compatible. To enable the DC output, the "Inh/Ena" terminal must either be shorted to the "Rtn" terminal or pulled to within 0.8 Vdc of the "Rtn" terminal. An open collector or contact closure can be used.

C5-C6; Output Programming Options (Wide Adjust Output models only) (voltage and/or current)

Choose one: C5 or C6
C5; The output voltage and current may be programmed from 0 to full rating by means of control voltage inputs of 0 to +5 Vdc.
C6; The output voltage and current may be programmed from 0 to full rating by means of control voltage inputs of 0 to +10 Vdc.
Voltage mode accuracy: 0.5%. Current mode accuracy: 0.5% or ±15 mA, whichever is greater. Accuracy percentages do not apply below 5% of output rating.

C7; Voltage and Current Monitoring (Included with option M3)

For models with no programming or with 0-10v programming (option "C6"):

Voltage Monitor Terminal: Permits remote monitoring of output voltage, stepped down by a ratio of 10:1 (for 3.3v to 90v models) or 100:1 (for 100v to 150v models). Accuracy is 0.5% of maximum rated output voltage.

Current Monitor Terminal: For models with greater than 10 amps output current: permits remote monitoring of output current, stepped down by a ratio of 100 mV/Amp (accuracy is 1% of maximum rated output current). For models with less than 10 amps output current: permits remote monitoring of output current, stepped down by a ratio of 1000 mV/Amp. (Accuracy is 1% of maximum rated output current or ±15 mA, whichever is greater.)

For models with 0-5v programming (option "C5"):

Voltage Monitor Terminal: Permits remote monitoring of output voltage, stepped down by a ratio of 10:1 (for 3.3v to 45v models) or 100:1 (for 48v to 150v models). Accuracy is 0.5% of maximum rated output voltage.

Current Monitor Terminal: For models with greater than 45 amps output current: permits remote monitoring of output current, stepped down by a ratio of 10 mV/Amp. For models with from 5 amps to 45 amps output current: permits remote monitoring of output current, stepped down by a ratio of 100 mV/Amp. For models with less than 4.5 amps output current: permits remote monitoring of output current, stepped down by a ratio of 1000 mV/Amp.
(Accuracy is 1% of maximum rated output current or ±15 mA, whichever is greater.)

(When monitoring the output voltage and/or current by means of the monitor terminals, the use of an instrument having an input impedance of at least 10 megohms is recommended.)

C9; Latching Overcurrent control

If current is greater than 15% of the maximum rated output current, the power supply latches off. Reset by momentarily removing AC input power. This option is included with Option A2. (Available on Single Output models only. Not available with option A1.)

Infinity Rack Mounting & Benchtop

OPTIONS

DIO1; Digital Interface
Can be used to monitor and/or control output voltage and current. Includes isolated Ethernet (10/100Mbps), RS232, and USB (to add RS485, choose option "**DIO2**", add $30.00) interfaces, utilizing 16 bit DAC and ADC. This option incorporates C4 (**Enable**), C6 (**Output Programming**), and C7 (**Voltage/Current Monitoring**) options, so if you specify the DIO1 or DIO2 option, do not also specify C4, C6, or C7 options.

E1; Output blocking protection diode
Used for battery charging or redundant applications. Derate output by 10%.

E2; Transient protection for electrically noisy environments
Transient protection for AC input and DC output.

E3; High Frequency pulsed load filtering
Recommended for applications such as "switched loads" and "stepper motors".

E4; Series Operation Diode
Allows power supplies to operate in series, for applications requiring higher output voltage.

G1-G2; Alarm with Relay Contacts Options
Choose one: G1 or G2
G1; NC Relay contacts close when output voltage drops more than 10% below nominal.
G2; NO Relay contacts open when output voltage drops more than 10% below nominal.

G5; Temperature monitor
The temperature monitor is used to measure the power supply's internal temperature. Monitor output voltage is set to 2.5 Vdc at 25°C and varies above or below this value by 0.1 Vdc per °C. For example, if the temperature is 20°C the output will be 2 Vdc. (Not available with options H1-H8).

H; Handles

H1-H8; Additional Low Current Auxiliary Voltage Options
<1% initial Accuracy, ±0.2% Line and ±0.2% Load Regulation, <10mV peak-to-peak ripple. (Not available with option G5.)
Choose one: H1 or H2 or H3 or H4 or H5 or H6 or H7 or H8

H1; Auxiliary output:	3.3 Vdc, 0.1 amp
H2; Auxiliary output:	5 Vdc, 0.1 amp
H3; Auxiliary output:	12 Vdc, 0.1 amp
H4; Auxiliary output:	13.8 Vdc, 0.1 amp
H5; Auxiliary output:	15 Vdc, 0.1 amp
H6; Auxiliary output:	-5 Vdc, 0.1 amp
H7; Auxiliary output:	-12 Vdc, 0.1 amp
H8; Auxiliary output:	-15 Vdc, 0.1 amp

J2-J3; Output Redundancy Options
Choose one: J2 or J3
J2; N+1 Redundancy (Available on Single Output models only.)
Allows up to 4 like models to be wired in N+1 redundancy. An internal isolation OR-ing diode is included in each power supply. This option forces equal current sharing among like model supplies. The DC output load lines and remote sense lines may be directly connected in parallel and all 'S bus' terminals must be connected together. The output voltage of each supply is individually set so that the difference between the highest and the lowest is less than 100 mv. The current limiting set point of each supply should be set at equal value. Power supply output current must be derated by 10%.
Includes:
- Voltage and current monitoring (Option C7).
- Output blocking protection diode (Option E1).

J3; 'OR-ing' or 'Blocking Diode'
Redundancy is attained by simply wiring two units in parallel. Derate output by 10%. (Available on Single Output models only. Not available with options C9, E5.)
Includes:
- Non-latching OVP set 15% above rated output (Option A2).
- Alarm with relay contacts that close when output voltage drops more than 10% below nominal (Option G1).
- Output blocking protection diode (Option E1).
- Remote sensing.

K6; Final Test Data
Final test data also includes an extended 8 hour burn-in.

L1, L3; see B3 thru B6 (that section includes L1 and L3, which follows B3 thru B6.)

M3; Digital Voltage and Current Meters

single & dual tracking outputs

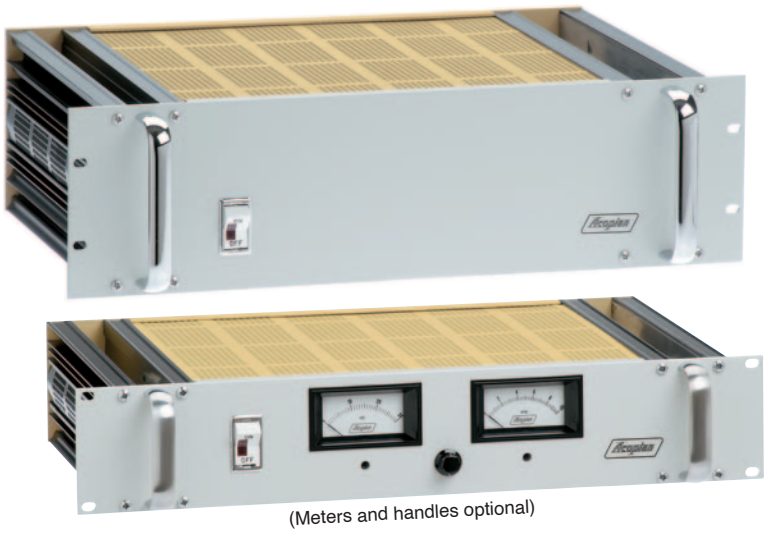
Rack Mounting

LINEAR REGULATED
AC-DC

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

c UL us (single output models)

UL (dual tracking output models)



(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:

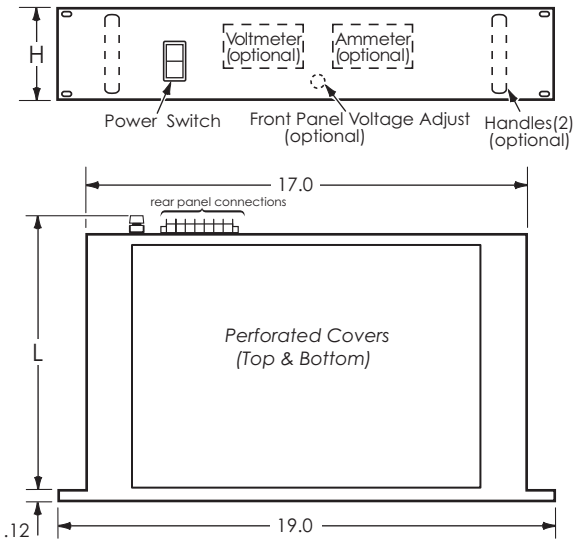
Single Output Models: 0.015%/°C (Typical).
Dual Output Models: 0.02%/°C (Typical).

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.

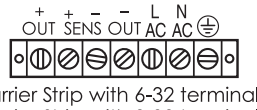


Case Size	H	L	Approx. Weight
3P11	3½″	10⅞″	22 lb.
3P17	3½″	16 13/16″	38 lb.
5P12	5¼″	11 15/16″	28 lb.
5P17	5¼″	16 13/16″	53 lb.

All dimensions in inches.

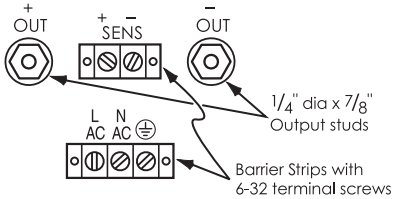
CONNECTIONS (Single Output models)**:**

Case sizes 3P11 and 5P12:

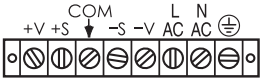


3P11 Barrier Strip with 6-32 terminal screws
5P12 Barrier Strip with 8-32 terminal screws

Case sizes 3P17 and 5P17:



CONNECTIONS (Dual Output models)**:**



Barrier Strip with 6-32 terminal screws

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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	Model	Case Size
1.5	.5	20	20	.005	.005	.25	1.5PT20	3P11
1.5	.5	32	27	.005	.005	.25	1.5PH32	5P12
1.5	.25	60	47	.05	.05	1	1.5PH60	5P17
2	.5	20	20	.005	.005	.25	2PT20	3P11
2	.5	30	25	.005	.005	.25	2PH30	5P12
3	.5	20	20	.005	.005	.25	3PT20	3P11
3	.5	30	25	.005	.005	.25	3PH30	5P12
3	.25	60	47	.05	.05	1	3PH60	5P17
3.3	.5	20	20	.005	.005	.25	3.3PT20	3P11
3.3	.5	32	27	.005	.005	.25	3.3PH32	5P12
3.3	.25	60	47	.05	.05	1	3.3PH60	5P17
5	.5	20	20	.005	.005	.25	5PT20	3P11
5	.5	32	27	.005	.005	.25	5PH32	5P12
5	.25	48	37	.05	.05	1	5PT48	3P17
5	.25	60	47	.05	.05	1	5PH60	5P17
6	.5	20	20	.005	.005	.25	6PT20	3P11
6	.5	28	23	.005	.005	.25	6PH28	5P12
6	.25	47	36	.05	.05	1	6PT47	3P17
6	.25	58	45	.05	.05	1	6PH58	5P17
7	.5	20	20	.005	.005	.25	7PT20	3P11
8	.5	20	20	.005	.005	.25	8PT20	3P11
8	.5	28	23	.005	.005	.25	8PH28	5P12
8	.25	54	42	.05	.05	1	8PH54	5P17
9	.5	20	20	.005	.005	.25	9PT20	3P11
9	.5	41	32	.05	.05	1	9PT41	3P17
9	.5	52	41	.05	.05	1	9PH52	5P17
10	.5	20	20	.005	.005	.25	10PT20	3P11
10	.5	25	20	.005	.005	.25	10PH25	5P12
10	.5	50	39	.05	.05	1	10PH50	5P17
12	.5	17	17	.005	.005	.25	12PT17	3P11
12	.5	22	22	.005	.005	.25	12PH22	5P12
12	.5	33	26	.05	.05	1	12PT33	3P17
12	.5	45	35	.05	.05	1	12PH45	5P17
13	.5	16	16	.005	.005	.25	13PT16	3P11
13	.5	43	34	.05	.05	1	13PH43	5P17
14	.5	12	12	.005	.005	.25	14PT12	3P11
15	.5	10	10	.005	.005	.25	15PT10	3P11
15	.5	19	16	.005	.005	.25	15PH19	5P12
15	.5	25	20	.05	.05	1	15PT25	3P17
15	.5	40	31	.05	.05	1	15PH40	5P17
16	.5	10	10	.005	.005	.25	16PT10	3P11
18	.5	10	10	.005	.005	.25	18PT10	3P11
18	.5	18	15	.005	.005	.25	18PH18	5P12
18	.5	24	19	.05	.05	1	18PT24	3P17
18	.5	36	28	.05	.05	1	18PH36	5P17
20	.5	10	10	.005	.005	.25	20PT10	3P11
20	.5	16	14	.005	.005	.25	20PH16	5P12
20	.5	23	18	.05	.05	1	20PT23	3P17
20	.5	32	25	.05	.05	1	20PH32	5P17
22	.5	10	10	.005	.005	.25	22PT10	3P11

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	Model	Case Size
24	.5	10	10	.005	.005	.25	24PT10	3P11
24	.5	15	13	.005	.005	.25	24PH15	5P12
24	.5	20	16	.05	.05	1	24PT20	3P17
24	.5	30	23	.05	.05	1	24PH30	5P17
25	.5	10	10	.005	.005	.25	25PT10	3P11
26	.5	10	10	.005	.005	.25	26PT10	3P11
28	.5	10	10	.005	.005	.25	28PT10	3P11
28	.5	14	12	.005	.005	.25	28PH14	5P12
28	.5	19	15	.05	.05	1	28PT19	3P17
28	.5	28	22	.05	.05	1	28PH28	5P17
30	.5	10	10	.005	.005	.25	30PT10	3P11
30	.5	14	12	.005	.005	.25	30PH14	5P12
32	.5	5	5	.005	.005	.25	32PT5	3P11
32	.5	10	10	.005	.005	.25	32PT10	5P12
34	.5	5	5	.005	.005	.25	34PT5	3P11
34	.5	10	10	.005	.005	.25	34PT10	5P12
35	.5	5	5	.005	.005	.25	35PT5	3P11
35	.5	10	10	.005	.005	.25	35PT10	5P12
36	.5	5	5	.005	.005	.25	36PT5	3P11
36	.5	10	10	.005	.005	.25	36PT10	5P12
38	.5	5	5	.005	.005	.25	38PT5	3P11
38	.5	10	10	.005	.005	.25	38PT10	5P12
40	.5	5	5	.005	.005	.25	40PT5	3P11
40	.5	10	10	.005	.005	.25	40PT10	5P12
45	.5	5	5	.005	.005	.25	45PT5	3P11
45	.5	10	10	.005	.005	.25	45PT10	5P12
48	.5	5	5	.005	.005	.25	48PT5	3P11
48	.5	10	10	.005	.005	.25	48PT10	5P12
48	.5	15	12	.005	.005	.25	48PT15	5P17
50	.5	5	5	.005	.005	.25	50PT5	3P11
50	.5	10	10	.005	.005	.25	50PT10	5P12
55	.5	5	3.8	.005	.005	.25	55PT5	3P11
55	.5	8	6	.005	.005	.25	55PT8	5P12
60	.5	5	3.8	.005	.005	.25	60PT5	3P11
60	.5	8	6	.005	.005	.25	60PT8	5P12
75	1	4	3	.01	.01	1	75PT4	3P11
75	1	5.6	4.2	.01	.01	1	75PT5	5P12
90	1	3.3	2.5	.01	.01	1	90PT3	3P11
90	1	4.4	3.3	.01	.01	1	90PT4	5P12
100	1	3	2.2	.01	.01	1	100PT3	3P11
100	1	4	3	.01	.01	1	100PT4	5P12
120	1	2.5	1.8	.01	.01	1	120PT2	3P11
120	1	3.5	2.6	.01	.01	1	120PT3	5P12
125	1	2.5	1.8	.01	.01	1	125PT2	3P11
125	1	3.5	2.6	.01	.01	1	125PT3	5P12
150	1	2.3	1.7	.01	.01	1	150PT2	3P11
150	1	3	2.2	.01	.01	1	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	Model	Case Size
±12	.5	7	5.6	.1	.1	1.5	PD12-700	3P11
±12	.5	9	7.2	.1	.1	1.5	PD12-900	5P12
±15	.5	7	5.6	.1	.1	1.5	PD15-700	3P11
±15	.5	9	7.2	.1	.1	1.5	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.

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.

Handles: Add suffix "H" to model number.

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

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

Metering (Dual Output Models):
Ammeters: One for each output. Add suffix "A" to model number. "A" and "F" options cannot be combined in one power supply.
Voltmeters: One for each output. Add suffix "F" to model number. "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.

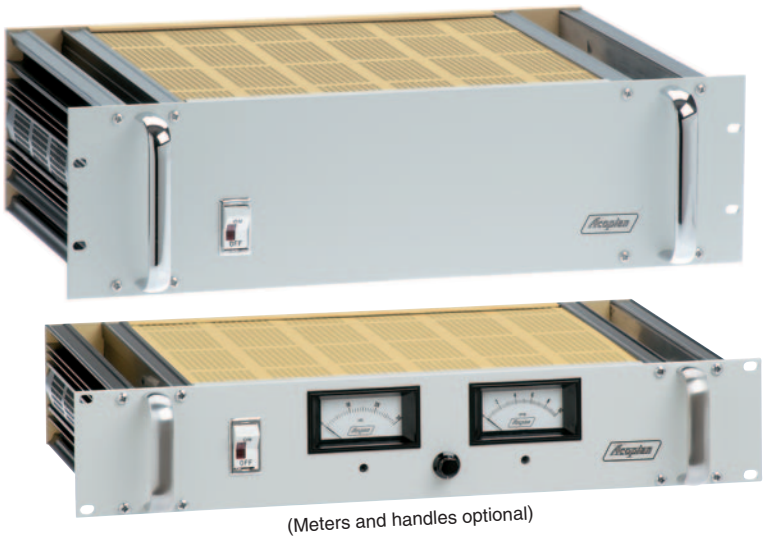
230 Volt Input: For operation on inputs of 210 to 250 VAC, 50-400 Hz. Add suffix "–230" to model number. The "–230" option requires two additional days.

wide adjust output

Rack Mounting

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

- Shipped Within 9 Days
- U.L. Recognized
- Five Year Warranty
  (w/exceptions)



(Meters and handles optional)

Similar to the rack mounting power supplies listed on pages F39 and F40, 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.

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.

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

Ammeter: Add suffix "A" to model number.

Voltmeter: Add suffix "F" to model number.

Handles: Add suffix "H" to model number.

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

Front Panel Voltage 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.

Front Panel Current Limiting Control: For adjustable current limiting models, a current limit control can be mounted on the front panel. Add suffix "Y" to the model number.

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

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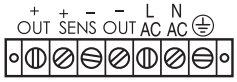
Output Voltage Range	Output Current Amps. at 40°C	55°C	71°C	Voltage Prgmg. Coeff. (Ω/V)	Case Size	Voltage Programmable Fixed Current Limiting Model	Voltage Programmable Adjust. Current Limiting Model
0-6	10.0	8.0	6.0	820	3P11	A06PX10	P06PX10
0-6	16.0	12.8	9.6	820	5P12	A06PX16	P06PX16
0-6	23.0	18.4	13.8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

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

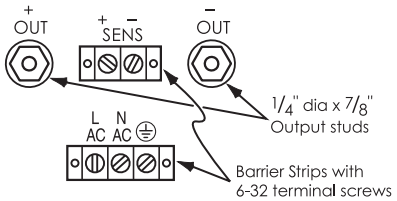
CONNECTIONS:

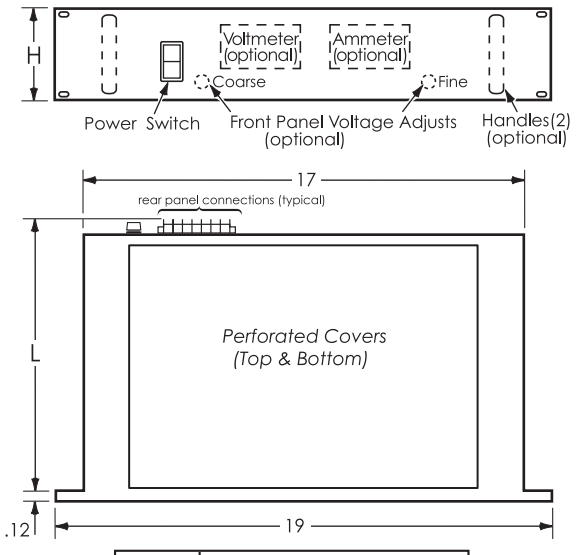
Case sizes 3P11 and 5P12:



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.

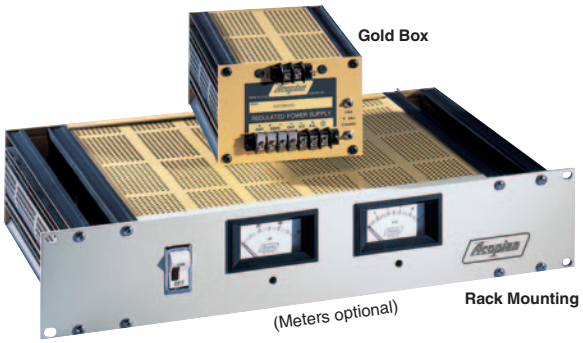
All dimensions in inches.

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 F23 and F24



LINEAR REGULATED AC–DC

Plug-in

SINGLE OUTPUT & WIDE ADJUST OUTPUT

LINEAR REGULATED
AC-DC

- 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. (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. 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 table.

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).

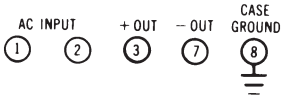
Ambient Operating Temperature: –10 to +65°C. No derating required.

MIL Tested and Extended Temperature Range: See page F48.

Storage Temperature: –55 to +85°C.

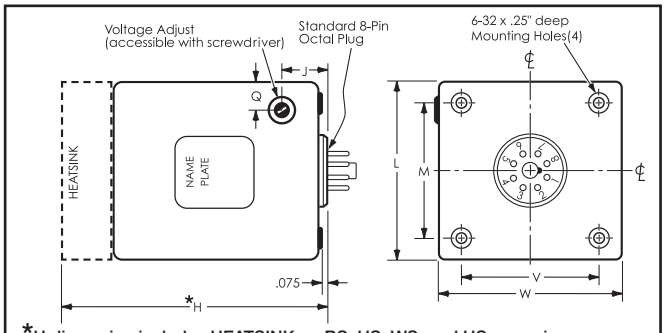
Installation: Plugs into standard 8-pin octal socket (see page H4). Four mounting holes (6-32) are provided in the base for fastening the module when used in other than the upright position, or if extreme vibration will be encountered.

PIN CONNECTIONS: Standard model.



OPTIONS

Solder Terminals: All models can be furnished with solder terminals instead of the octal type plug. Contact factory or see web site for detailed information.

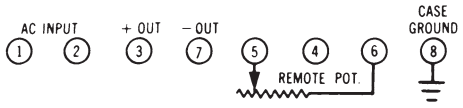


*H dimension includes HEATSINK on BS, US, WS, and HS case sizes.

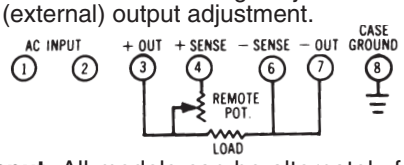
Case Size	L	W	H*	M	V	J	Q	Approx. Weight
AS	3.40	3.28	4.67	2.625	2.625	1.00	.66	2 lb. 8 oz.
BS	3.40	3.28	5.33	2.625	2.625	1.00	.66	2 lb. 14 oz.
TS	3.33	4.15	4.85	2.562	2.750	1.12	.62	3 lb. 6 oz.
US	3.33	4.15	5.53	2.562	2.750	1.12	.62	3 lb. 8 oz.
WS	3.40	5.02	5.53	2.562	3.562	1.12	.62	4 lb. 14 oz.
HS	3.40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

All dimensions in inches.

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.



Remote Sensing: Provision for remote sensing of the output voltage to compensate for drops in the load lines can be furnished. 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. 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.

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SINGLE OUTPUT

Nominal Output Voltage	Adjust Range ± V	Output Current Amps.	Regulation Load ± %	Regulation Line ± %	Ripple mV RMS	Model	Case Size
1	.25	.100	.25	.05	0.5	1J10	AS
1.5	.5	.750	.7	.05	1	1.5J75	AS
2.5	.5	.750	.7	.05	1	2.5J75	AS
3.3	.5	.750	.7	.05	1	3.3J75	AS
3.3	.5	1.0	.5	.05	1	3.3J100	AS
3.3	.5	1.5	.5	.05	1	3.3J150	US
3.3	.5	2.0	.5	.05	1	3.3J200	WS
3.3	.5	3.0	.5	.05	1	3.3J300	WS
3.3	.5	4.0	.5	.05	1	3.3J400	HS
4	1	.750	.4	.05	1	4J75	AS
4	.5	1.0	.5	.05	1	4J100	AS
5	1	.750	.4	.05	1	5J75	AS
5	.5	1.0	.5	.05	1	5J100	AS
5	.5	1.5	.4	.05	1	5J150	US
5	.5	2.0	.5	.05	1	5J200	WS
5	.5	3.0	.5	.05	1	5J300	WS
5	.5	4.0	.5	.05	1	5J400	HS
5	.5	5.0	.7	.05	1	5J500	HS
6	1	.400	.15	.05	1	6J40	AS
6	1	.750	.3	.05	1	6J75	AS
6	1	1.0	.3	.05	1	6J100	AS
6	.5	2.0	.3	.05	1	6J200	WS
6	.5	3.0	.5	.05	1	6J300	WS
6	.5	4.0	.5	.05	1	6J400	HS
6	.5	5.0	.7	.05	1	6J500	HS
8	1	.750	.2	.05	1	8J75	AS
8	1	1.0	.2	.05	1	8J100	AS
9	1	.750	.15	.05	1	9J75	AS
9	1	1.0	.2	.05	1	9J100	AS
9	1	1.5	.3	.05	1	9J150	US
9	.5	2.0	.2	.05	1	9J200	WS
10	1	.750	.15	.05	1	10J75	AS
10	1	1.0	.2	.05	1	10J100	AS
10	1	1.5	.25	.05	1	10J150	US
10	.5	2.0	.15	.05	1	10J200	WS
10	.5	3.0	.25	.05	1	10J300	HS
12	1	.750	.15	.05	1	12J75	AS
12	1	1.0	.1	.05	1	12J100	AS
12	1	1.5	.2	.05	1	12J150	US
12	.5	2.0	.1	.05	1	12J200	WS
12	.5	3.0	.25	.05	1	12J300	HS
15	1	.400	.1	.05	1	15J40	AS
15	1	.750	.15	.05	1	15J75	AS
15	1	1.0	.15	.05	1	15J100	AS
15	1	1.5	.2	.05	1	15J150	US
15	.5	2.0	.1	.05	1	15J200	WS
15	.5	3.0	.25	.05	1	15J300	HS
16	1	.400	.1	.05	1	16J40	AS
16	1	.750	.15	.05	1	16J75	AS
16	1	1.0	.15	.05	1	16J100	AS
18	1	.400	.1	.05	1	18J40	AS
18	1	.750	.15	.05	1	18J75	AS
18	1	1.0	.15	.05	1	18J100	US
18	.5	2.0	.1	.05	1	18J200	WS
20	1	.400	.1	.05	1	20J40	AS
20	1	.750	.15	.05	1	20J75	AS
20	1	1.5	.2	.05	1	20J150	WS
20	.5	2.0	.1	.05	1	20J200	WS
22	1	.400	.1	.05	1	22J40	AS
22	1	.750	.15	.05	1	22J75	AS
22	1	1.0	.15	.05	1	22J100	US
22	1	1.5	.2	.05	1	22J150	WS
22	.5	2.0	.1	.05	1	22J200	WS
24	1	.400	.05	.05	1	24J40	AS
24	1	.750	.1	.05	1	24J75	AS
24	1	1.0	.1	.05	1	24J100	US
24	1	1.5	.15	.05	1	24J150	WS
24	.5	2.0	.1	.05	1	24J200	WS
25	1	.400	.05	.05	1	25J40	AS
25	1	.750	.1	.05	1	25J75	AS
25	1	1.0	.1	.05	1	25J100	US
25	1	1.5	.15	.05	1	25J150	WS
25	.5	2.0	.1	.05	1	25J200	WS
28	1	.400	.05	.05	1	28J40	AS
28	1	.500	.05	.05	1	28J50	AS
28	1	.750	.1	.05	1	28J75	TS
28	1	1.0	.1	.05	1	28J100	US
28	1	1.5	.15	.05	1	28J150	WS
28	.5	2.0	.1	.05	1	28J200	WS
30	1	.400	.05	.05	1	30J40	AS
30	1	.500	.05	.05	1	30J50	AS
30	1	.750	.1	.05	1	30J75	TS
30	1	1.0	.1	.05	1	30J100	US
30	1	1.5	.15	.05	1	30J150	WS
30	.5	2.0	.1	.05	1	30J200	WS
32	1	.300	.05	.05	1	32J30	AS
32	1	.500	.05	.05	1	32J50	AS
32	1	.600	.1	.05	1	32J60	TS
32	1	1.0	.1	.05	1	32J100	US
32	1	1.5	.1	.05	1	32J150	WS
34	1	.500	.05	.05	1	34J50	AS
35	1	.500	.05	.05	1	35J50	AS
36	1	.300	.05	.05	1	36J30	AS
36	1	.500	.05	.05	1	36J50	AS
36	1	.600	.1	.05	1	36J60	TS
36	1	.800	.1	.05	1	36J80	TS
36	1	1.0	.2	.05	1	36J100	US
36	1	1.5	.1	.05	1	36J150	WS
38	1	.500	.05	.05	1	38J50	AS
38	1	1.0	.2	.05	1	38J100	US
40	1	.300	.05	.05	1	40J30	AS
40	1	.400	.1	.05	1	40J40	AS
40	1	.600	.1	.05	1	40J60	TS
40	1	1.0	.2	.05	1	40J100	US
42	1	.400	.1	.05	1	42J40	AS
42	1	.600	.15	.05	1	42J60	TS
45	1	.400	.1	.05	1	45J40	AS
45	1	.600	.15	.05	1	45J60	TS
48	1	.300	.05	.05	1	48J30	AS
48	1	.400	.1	.05	1	48J40	AS
48	1	.600	.15	.05	1	48J60	TS
50	1	.300	.05	.05	1	50J30	AS
50	1	.500	.1	.05	1	50J50	TS
55	1	.200	.05	.05	1	55J20	AS
60	1	.200	.05	.05	1	60J20	AS
60	1	.300	.05	.05	1	60J30	AS
60	1	.400	.05	.05	1	60J40	TS
65	1	.100	.05	.05	1	65J10	AS
65	1	.300	.05	.05	1	65J30	AS
70	1	.200	.05	.05	1	70J20	AS
70	1	.300	.05	.05	1	70J30	AS
75	1	.200	.05	.05	1	75J20	AS
80	1	.200	.05	.05	1	80J20	AS
90	1	.100	.05	.05	1	90J10	AS
90	1	.200	.05	.05	1	90J20	AS
95	1	.100	.05	.05	1	95J10	AS
95	1	.200	.05	.05	1	95J20	AS
100	1	.100	.05	.05	1	100J10	AS
100	1	.200	.05	.05	1	100J20	AS
105	1	.100	.05	.05	1	105J10	AS
105	1	.200	.05	.05	1	105J20	AS
110	1	.100	.05	.05	1	110J10	AS
110	1	.200	.05	.05	1	110J20	AS
120	1	.100	.05	.05	1	120J10	AS
120	1	.200	.05	.05	1	120J20	AS
125	1	.100	.05	.05	1	125J10	AS
125	1	.200	.05	.05	1	125J20	AS
130	1	.100	.05	.05	1	130J10	AS
130	1	.200	.05	.05	1	130J20	AS
140	1	.200	.05	.05	1	140J20	AS
150	1	.050	.05	.05	1	150J05	AS
150	1	.200	.05	.05	1	150J20	AS
200	1	.100	.05	.05	1	200J10	AS

WIDE ADJUST OUTPUT

Shown below is a partial listing of models with increased voltage adjustment ranges. Contact the factory for information on other models.

Output Voltage Range	Output Current Amps.	Regulation Load ± %	Regulation Line ± %	Ripple mV RMS	Model	Case Size
2 to 30	.300	.5	.05	1	J230	AS
3 to 15	.400	.5	.05	1	J315	BS
4 to 10	1.5	.5	.05	1	J410	US
5 to 15	2.0	.5	.1	5	J515	HS
5 to 25	.100	.1	.05	1	J525	AS
6 to 30	.200	.1	.05	1	J630	AS
10 to 18	.600	.3	.05	1	J1018	BS
10 to 40	.200	.1	.05	1	J1040	AS
15 to 25	.500	.1	.05	1	J1525	BS
15 to 30	.300	.1	.05	1	J1530	BS
16 to 24	.750	.15	.05	1	J1624	BS
18 to 30	.400	.1	.05	1	J1830	BS
20 to 28	.500	.1	.05	1	J2028	BS
23 to 32	1.0	.15	.05	1	J2332	US
24 to 32	.500	.1	.05	1	J2432	BS
24 to 40	.400	.1	.05	1	J2440	BS
24 to 50	.250	.1	.05	1	J2450	AS
28 to 60	.250	.1	.05	1	J2860	BS
30 to 70	.300	.1	.05	1	J3070	BS

Plug-in

DUAL ISOLATED OUTPUTS
(User-selectable)

LINEAR REGULATED
AC-DC

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

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 F46.

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 and Extended Temperature Range: See page F48.

Storage Temperature: –55 to +85°C.

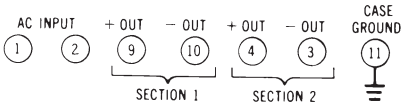
Installation: Plugs into standard 11-pin octal-type socket (see page H4). Four mounting holes (6-32) are provided in the base for fastening the module when used in other than the upright position, or if extreme vibration will be encountered.

HOW TO ORDER

Select two **sections** from the table on page F46. The complete model number is the combination of the two **sections** selected. Example: The combination of section 6J40D and section 12J100D is Model 6J40D-12J100D. 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.

PIN CONNECTIONS:

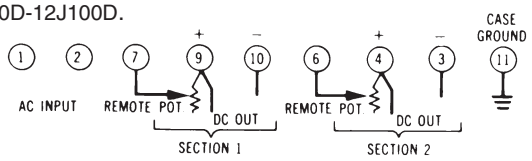
Standard model.



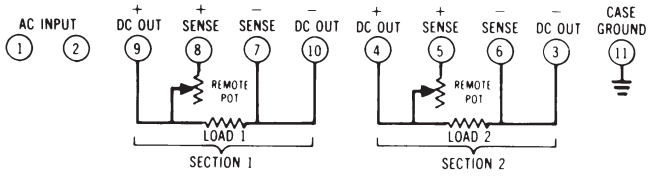
OPTIONS

Solder Terminals: All models can be furnished with solder terminals instead of the octal type plug. Contact factory or see web site for detailed information.

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: E6J40D-12J100D.



Remote Sensing: Provision for remote sensing of the output voltages, to compensate for drops in the load lines, can be furnished. 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. To order, add suffix "–230" to model number. 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.

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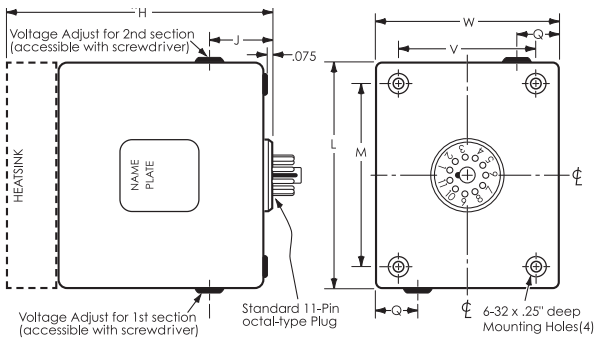
DUAL OUTPUT (User-selectable)

Nominal Output Voltage	Adjust Range ± V	Output Current Amps.	Regulation Load ± %	Regulation Line ± %	Ripple mV RMS	(see 'How to Order') Section	Case Size
3.3	.5	.500	.5	.05	1	3.3J50D	TDJ
3.3	.5	.700	.5	.05	1	3.3J70D	UDJ
3.3	.5	1.0	.5	.05	1	3.3J100D	WDJ
4	1	.500	.3	.05	1	4J50D	TDJ
4	.5	.700	.4	.05	1	4J70D	UDJ
4	.5	1.0	.5	.05	1	4J100D	WDJ
5	1	.400	.3	.05	1	5J40D	TDJ
5	1	.500	.3	.05	1	5J50D	TDJ
5	.5	.700	.4	.05	1	5J70D	UDJ
5	.5	1.0	.5	.05	1	5J100D	WDJ
5	.25	2.0	.5	.05	1	5J200D	WDJ
6	1	.400	.15	.05	1	6J40D	TDJ
6	1	.500	.15	.05	1	6J50D	TDJ
6	.5	.700	.2	.05	1	6J70D	UDJ
6	.5	1.0	.3	.05	1	6J100D	WDJ
7	1	.400	.15	.05	1	7J40D	TDJ
7	1	.500	.15	.05	1	7J50D	TDJ
7	.5	.700	.2	.05	1	7J70D	UDJ
7	.5	1.0	.3	.05	1	7J100D	WDJ
8	1	.400	.1	.05	1	8J40D	TDJ
8	1	.500	.1	.05	1	8J50D	TDJ
8	.5	.700	.15	.05	1	8J70D	UDJ
8	.5	1.0	.2	.05	1	8J100D	WDJ
9	1	.500	.1	.05	1	9J50D	TDJ
9	.5	.700	.15	.05	1	9J70D	UDJ
9	.5	1.0	.2	.05	1	9J100D	WDJ
10	1	.400	.1	.05	1	10J40D	TDJ
10	1	.500	.1	.05	1	10J50D	TDJ
10	.5	.700	.15	.05	1	10J70D	UDJ
10	.5	1.0	.2	.05	1	10J100D	WDJ
12	1	.400	.1	.05	1	12J40D	TDJ
12	1	.500	.1	.05	1	12J50D	TDJ
12	.5	.700	.1	.05	1	12J70D	UDJ
12	.5	1.0	.1	.05	1	12J100D	WDJ
13	1	.500	.1	.05	1	13J50D	TDJ
13	.5	.700	.1	.05	1	13J70D	UDJ
13	.5	1.0	.15	.05	1	13J100D	WDJ
15	1	.400	.1	.05	1	15J40D	TDJ
15	1	.500	.1	.05	1	15J50D	TDJ
15	.5	.700	.1	.05	1	15J70D	UDJ
15	.5	1.0	.15	.05	1	15J100D	WDJ
18	1	.400	.1	.05	1	18J40D	TDJ
18	1	.500	.1	.05	1	18J50D	TDJ
18	1	.750	.15	.05	1	18J75D	WDJ
18	.5	1.0	.15	.05	1	18J100D	WDJ

Nominal Output Voltage	Adjust Range ± V	Output Current Amps.	Regulation Load ± %	Regulation Line ± %	Ripple mV RMS	(see 'How to Order') Section	Case Size
20	1	.400	.1	.05	1	20J40D	TDJ
20	1	.500	.1	.05	1	20J50D	TDJ
20	1	.750	.15	.05	1	20J75D	WDJ
22	1	.400	.1	.05	1	22J40D	TDJ
24	1	.400	.1	.05	1	24J40D	TDJ
26	1	.400	.05	.05	1	26J40D	TDJ
28	1	.400	.05	.05	1	28J40D	TDJ
30	1	.400	.05	.05	1	30J40D	TDJ
32	1	.300	.05	.05	1	32J30D	TDJ
34	1	.300	.05	.05	1	34J30D	TDJ
35	1	.200	.05	.05	1	35J20D	TDJ
36	1	.200	.05	.05	1	36J20D	TDJ
40	1	.200	.05	.05	1	40J20D	TDJ
45	1	.200	.05	.05	1	45J20D	TDJ
48	1	.200	.05	.05	1	48J20D	TDJ
50	1	.200	.05	.05	1	50J20D	TDJ
55	1	.200	.05	.05	1	55J20D	TDJ
60	1	.100	.05	.05	1	60J10D	TDJ
65	1	.100	.05	.05	1	65J10D	TDJ
70	1	.050	.05	.05	1	70J05D	TDJ
70	1	.100	.05	.05	1	70J10D	TDJ
75	1	.100	.05	.05	1	75J10D	TDJ
80	1	.100	.05	.05	1	80J10D	TDJ
85	1	.100	.05	.05	1	85J10D	TDJ
90	1	.100	.05	.05	1	90J10D	TDJ
95	1	.100	.05	.05	1	95J10D	TDJ
100	1	.100	.05	.05	1	100J10D	TDJ
105	1	.100	.05	.05	1	105J10D	TDJ
110	1	.100	.05	.05	1	110J10D	TDJ
115	1	.100	.05	.05	1	115J10D	TDJ
120	1	.100	.05	.05	1	120J10D	TDJ
125	1	.100	.05	.05	1	125J10D	TDJ
130	1	.100	.05	.05	1	130J10D	TDJ
135	1	.100	.05	.05	1	135J10D	TDJ
140	1	.100	.05	.05	1	140J10D	TDJ
145	1	.100	.05	.05	1	145J10D	TDJ
150	1	.100	.05	.05	1	150J10D	TDJ



*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.

All dimensions in inches.

Plug-in

DUAL TRACKING OUTPUTS

LINEAR REGULATED
AC-DC

- 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 H4). 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:

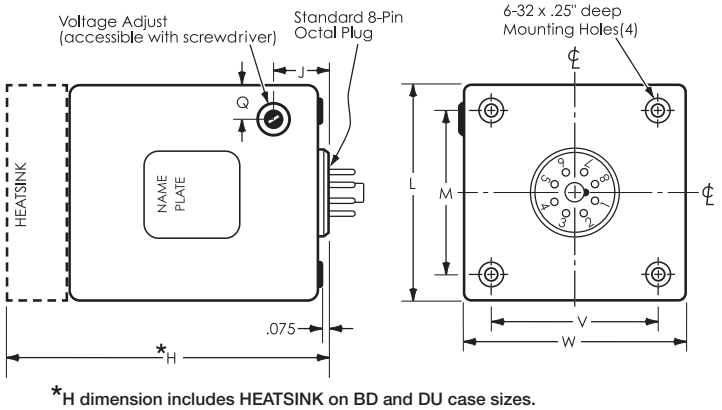
OPTIONS

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

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. 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.

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

All dimensions in inches.

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Plug-in Power Supplies

MIL TESTED and EXTENDED TEMP RANGE

(for Plug-in models on pages F43-F47)

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 our standard Plug-in power supplies.

HOW TO ORDER:

Add prefix "MIL-" to standard model number.
Example: Model 6J200 becomes MIL-6J200.

MIL-option equivalents to all the models included on pages F39 through F42, 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 $25.00/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.

Plug-in

UNREGULATED

AC-DC

single output & wide adjust output

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

(w/exceptions)

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%.

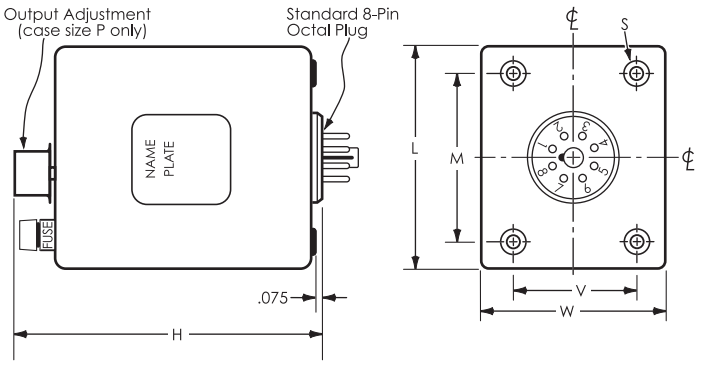
Line Regulation: Output voltage change due to line change directly proportional to input change.

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.

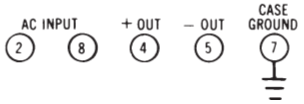
Installation: Plugs into standard 8-pin octal socket (see page H4). Four 6-32 mounting holes (on case sizes G and K) or four 10-32 mounting studs (on case sizes Q and P) are provided in the base for fastening the module when used in other than the upright position, or if extreme vibration will be encountered.



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.

All dimensions in inches.

PIN CONNECTIONS:



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. To order, add suffix "–230" to model number. The "–230" option requires two additional days.

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SINGLE OUTPUT

Nominal Output Voltage	Output Current Amps.	Ripple Volts RMS	Model	Case Size
7	1.0	.8	7U100	G
13	.600	.5	13U60	G
13	3.0	1.5	13U300	K
14	1.0	.7	14U100	G
16	1.0	.7	16U100	G
18	1.0	.7	18U100	G
20	3.0	2.3	20UP300	K
24	1.0	1.7	24U100	G
24	3.0	2.2	24UP300	K
28	1.0	1.7	28U100	G
28	3.0	2.7	28UP300	K
32	.400	.6	32U40	G
41	.400	.6	41U40	G
45	1.0	1.6	45UP100	G
48	.400	.6	48U40	G
50	1.0	1.6	50UP100	G
52	.400	.6	52U40	G
55	.250	.4	55U25	G
80	.300	1	80UP30	G
90	.300	2.2	90UP30	G
100	.200	1	100UP20	G
110	.200	1	110UP20	G
120	.200	1	120UP20	G
140	.200	2	140UP20	G
150	.200	2	150UP20	G
165	.200	2	165UP20	G
170	.200	2	170UP20	G
180	.200	2	180UP20	G
200	.200	2	200UP20	G
250	.200	4	250UP20	G
275	.100	3	275UP10	G
340	.100	3	340UP10	G
360	.100	3	360UP10	G
370	.100	3	370UP10	G
420	.100	6.7	420UP10	G
475	.020	3.1	475U02	G
580	.020	3.1	580U02*	G
750	.020	3.1	750U02*	G
900	.020	5	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	Model	Case Size
6	2.0	7.7 to 4.8	2.0	US6	G
6	5.0	7.6 to 5.0	2.5	UP6	K
12	1.5	14.9 to 10.9	2.5	US12	G
12	5.0	14.8 to 10.0	2.5	UP12	K
24	1.5	26.2 to 20.2	2.5	US24	G
24	3.5	26.0 to 21.0	2.0	UP24	K
24	5.0	26.6 to 20.0	3.2	U24	Q
28	1.0	30.6 to 25.5	2.0	US28	G
28	3.0	30.8 to 26.0	2.0	UP28	K
28	5.0	31.9 to 23.6	3.4	U28	Q
48	0.5	54.0 to 42.0	1.3	US48	G

WIDE ADJUST OUTPUT

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

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

(See page G4 for other unregulated wide adjust output power supplies.)

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

(w/exceptions)

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 F15 and F16, 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%.

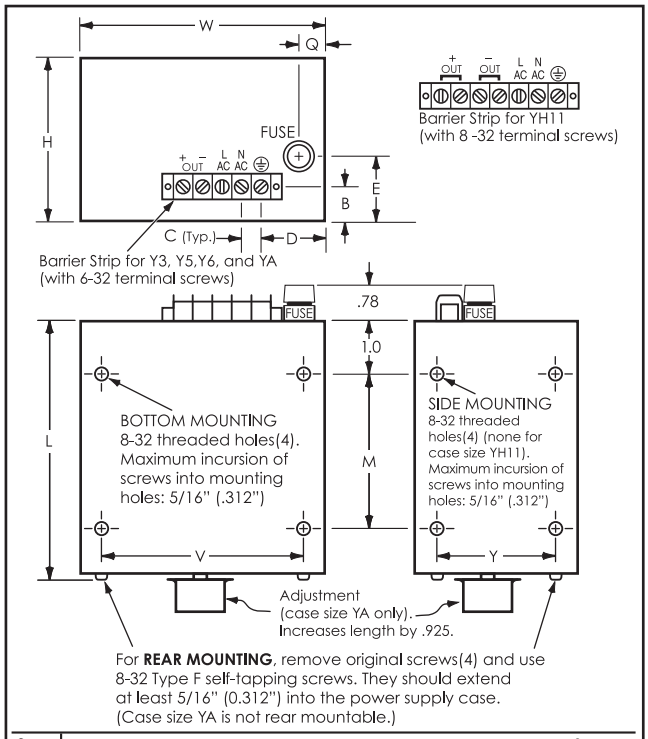
Line Regulation: Output voltage change due to line change directly proportional to input change.

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.

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 H3.



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.

All dimensions in inches.

OPTIONS

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

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 single output models. To order, add suffix "–230" to model number. The "–230" option requires two additional days.

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SINGLE OUTPUT

Nominal Output Voltage	Output Current Amps.	Output Voltage N/L-F/L	Ripple Volts RMS	Model	Case Size
4	.200	4.4 to 3.6	.2	U4Y20	Y3
5	10.0 (@ 5.0)	6.7 to 3.6 (5.0)	1.8 (1.3)	U5Y1000	Y6
6	2.0	7.7 to 4.8	2.0	U6Y200	Y3
6	5.0	7.5 to 5.0	1.8	U6Y500	Y5
7	8.0	8.0 to 5.4	1.5	U7Y800	Y6
9	10.0 (@ 5.0)	11.5 to 7.5 (9.0)	2.3 (1.3)	U9Y1000	Y6
10	10.0 (@ 5.0)	12.4 to 8.0 (9.8)	2.3 (1.3)	U10Y1000	Y6
12	1.5	14.9 to 10.9	2.5	U12Y150	Y3
12	5.0	14.8 to 10.5	1.8	U12Y500	Y5
12	10.0 (@ 5.0)	14.1 to 9.8 (11.5)	2.3 (1.3)	U12Y1000	Y6
14	1.0	15.4 to 12.6	.7	U14Y100	Y3
14	10.0 (@ 5.0)	16.4 to 12.1 (14.0)	2.3 (1.3)	U14Y1000	Y6
15	10.0 (@ 5.0)	17.2 to 12.8 (14.5)	2.3 (1.3)	U15Y1000	Y6
16	1.0	17.6 to 14.4	.7	U16Y100	Y3
16	10.0 (@ 5.0)	18.8 to 14.2 (16.0)	2.3 (1.3)	U16Y1000	Y6
18	1.0	19.8 to 16.2	.7	U18Y100	Y3
18	10.0 (@ 5.0)	21.0 to 15.8 (18.0)	2.4 (1.4)	U18Y1000	Y6
20	4.0	22.0 to 17.5	2.0	U20Y400	Y5
20	10.0 (@ 5.0)	23.7 to 18.3 (20.4)	2.4 (1.4)	U20Y1000	Y6
24	1.0	26.4 to 21.6	1.7	U24Y100	Y3
24	3.5	26.0 to 21.0	2.0	U24Y350	Y5
24	5.0	26.5 to 21.0	2.5	U24Y500	Y6
24	10.0	26.8 to 21.4	2.4	U24Y1000	Y6
24	17.0	26.4 to 21.6	1.5	U24Y1700	YH11
24	23.0	27.0 to 21.0	1.5	U24Y2300	YH11
25	5.0	28.1 to 22.3	2.5	U25Y500	Y6
27	5.0	30.0 to 24.0	2.6	U27Y500	Y6
28	1.0	30.8 to 25.2	1.7	U28Y100	Y3
28	3.0	30.8 to 26.0	2.0	U28Y300	Y5
28	5.0	31.2 to 24.8	2.6	U28Y500	Y6
28	8.0	30.2 to 25.0	2.4	U28Y800	Y6
28	15.0	30.8 to 25.2	1.5	U28Y1500	YH11
28	20.0	30.4 to 24.5	1.5	U28Y2000	YH11
30	2.0	33.0 to 27.0	1.5	U30Y200	Y5
32	.400	35.2 to 28.8	.6	U32Y40	Y3
32	5.0	35.5 to 28.0	3.3	U32Y500	Y6
35	5.0	38.0 to 30.0	3.3	U35Y500	Y6
37	5.0	40.5 to 32.2	3.3	U37Y500	Y6
38	5.0	43.0 to 34.0	3.3	U38Y500	Y6
40	1.0	44.0 to 36.0	1.6	40UY100	Y3
40	2.0	44.0 to 36.0	1.5	U40Y200	Y5
40	5.0	45.0 to 37.0	3.3	U40Y500	Y6

Nominal Output Voltage	Output Current Amps.	Output Voltage N/L-F/L	Ripple Volts RMS	Model	Case Size
41	.400	45.1 to 36.9	.6	U41Y40	Y3
42	5.0	48.0 to 36.0	6.5	U42Y500	Y6
44	2.0	48.4 to 39.6	1.5	U44Y200	Y5
45	1.0	49.5 to 40.5	1.6	45UY100	Y3
45	5.0	51.0 to 38.5	6.5	U45Y500	Y6
48	.400	52.8 to 43.2	.6	U48Y40	Y3
50	1.0	55 to 45	1.6	50UY100	Y3
52	.400	57.2 to 46.8	.6	U52Y40	Y3
55	.250	60.5 to 49.5	.4	U55Y25	Y3
60	1.0	65.3 to 53.0	2.8	U60Y100	Y5
62	.400	69.0 to 58.0	1.5	U62Y40	Y3
80	.300	88.0 to 72.0	1.0	U80Y30	Y3
90	.400	99.0 to 81.0	2.2	U90Y40	Y3
95	.150	105 to 85	1.1	U95Y15	Y3
100	.200	110 to 93	1.0	U100Y20	Y3
110	.200	121 to 100	1.0	U110Y20	Y3
120	.200	132 to 110	1.0	U120Y20	Y3
140	.200	154 to 126	1.7	U140Y20	Y3
150	.200	165 to 135	1.7	U150Y20	Y3
165	.200	176 to 144	1.7	U165Y20	Y3
170	.200	187 to 153	2.0	U170Y20	Y3
180	.200	190 to 162	2.0	U180Y20	Y3
200	.200	220 to 180	2.0	U200Y20	Y3
250	.200	275 to 225	4.0	250UY20	Y3
275	.100	303 to 247	3.0	U275Y10	Y3
275	.200	303 to 247	4.0	U275Y20	Y5
300	.200	330 to 270	5.0	U300Y20	Y5
325	.200	360 to 295	6.0	U325Y20	Y5
340	.100	374 to 306	3.0	U340Y10	Y3
360	.100	396 to 324	3.0	U360Y10	Y3
370	.100	407 to 333	3.0	U370Y10	Y3
400	.200	440 to 360	6.0	U400Y20	Y5
420	.100	462 to 378	6.7	U420Y10	Y3
475	.020	523 to 426	3.1	U475Y02	Y3
500	.200	550 to 450	9.1	U500Y20	Y5
550	.100	605 to 495	4.8	U550Y10*	Y5
580	.020	638 to 522	3.1	U580Y02*	Y3
600	.100	660 to 540	10.0	U600Y10*	Y5
750	.020	825 to 675	3.1	U750Y02*	Y3
800	.100	880 to 720	13.0	U800Y10*	Y5
900	.020	1008 to 792	5.0	U900Y02*	Y3
900	.100	1008 to 792	15.0	U900Y10*	Y5
1000	.100	1120 to 880	15.0	U1000Y10*	Y5

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

WIDE ADJUST OUTPUT

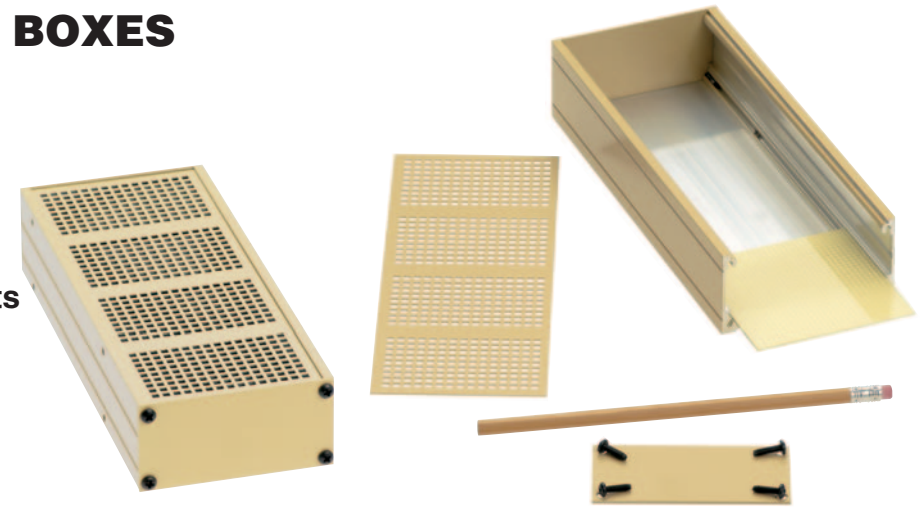
Output Voltage Range	Output Current Amps.	Ripple Volts RMS	Model	Case Size
0-8	2.0	2	U8YA200*	YA
0-15	1.5	2.5	U15YA150*	YA
0-54	1.0	1.6	U54YA100*	YA
0-95	.300	2.2	U95YA30*	YA
0-125	.200	1.5	U125YA20*	YA
0-220	.200	2	U220YA20*	YA
0-260	.200	4	U260YA20*	YA
0-370	.100	3	U370YA10*	YA
0-450	.100	6.7	U450YA10*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

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

CIRCUIT ENCLOSURE BOXES

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

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



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

DESCRIPTION

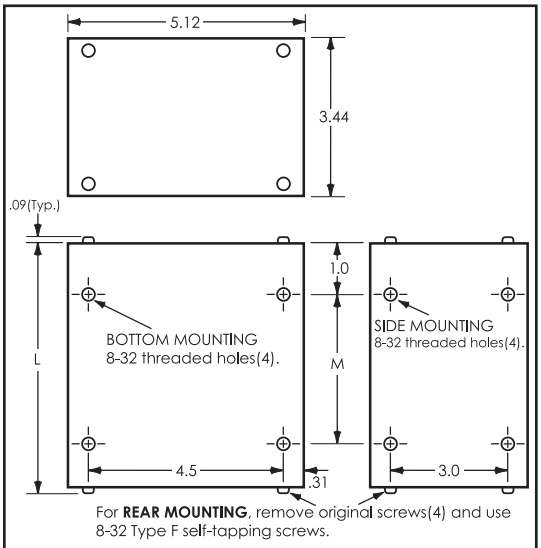
Moderate-dissipation components may be directly mounted to the case for heat sinking. Connectors, switches, controls and indicators are easily installed on the front and rear covers.

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 (0.062" thick).
Internal Circuit Board Mounting (Narrow Profile Enclosures): Grooves 1/4" above the inside bottom of the case are for holding a circuit board (0.062" 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 H3).

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 H3).
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.

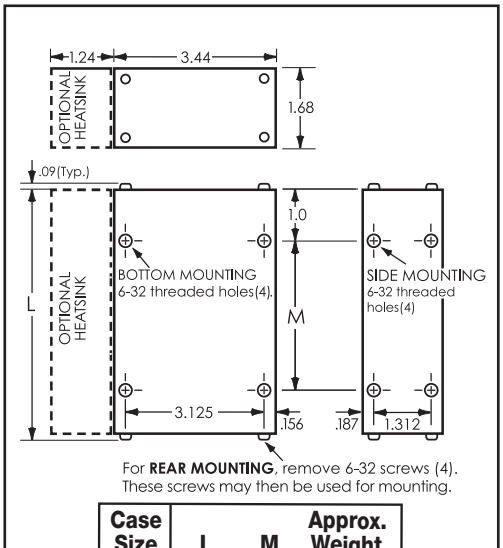
Gold Box:



Case Size	L	M	Approx. Weight
EG3	3.71	1.62	11 oz.
EG5	5.09	3.0	14 oz.
EG6	6.59	4.0	1 lb. 2 oz.
EG9	9.25	6.0	1 lb. 7 oz.
EG13	13.25	10.0	2 lb. 1 oz.

All dimensions in inches.

Narrow Profile:



Case Size	L	M	Approx. Weight
EN6	6.59	4.0	9 oz.
EN8	8.47	5.0	12 oz.

All dimensions in inches.

Other sizes:

Rack Mounting:
see page E6 & F39 drawings

Wall Mounting:
see page B6 drawing

SW Gold Box:
see page C12 drawing

HV Gold Box:
see page E2 & E4 drawings

Plug-in:
see page F43 drawing

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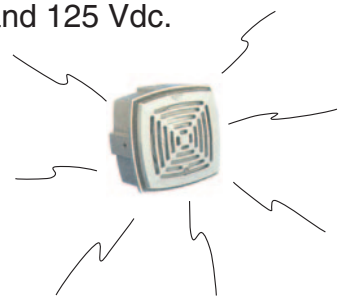
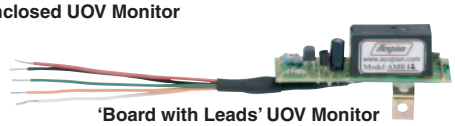
Under/Overvoltage Monitors

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

- Shipped Within 3 Days
- Five Year Warranty



Enclosed UOV Monitor



'Board with Leads' UOV Monitor

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)

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.

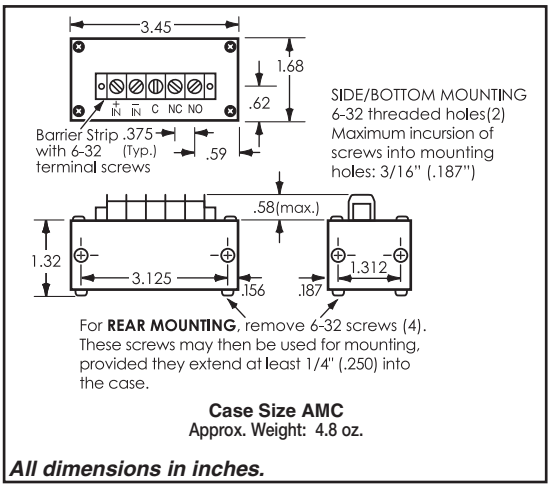
Storage Temperature: –40 to +85°C.

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

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.

Mounting: Threaded holes on the bottom and right side surface may be used for mounting. Accessory Mounting Kit NP6 (see page H3) 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.



Case Size AMC
Approx. Weight: 4.8 oz.

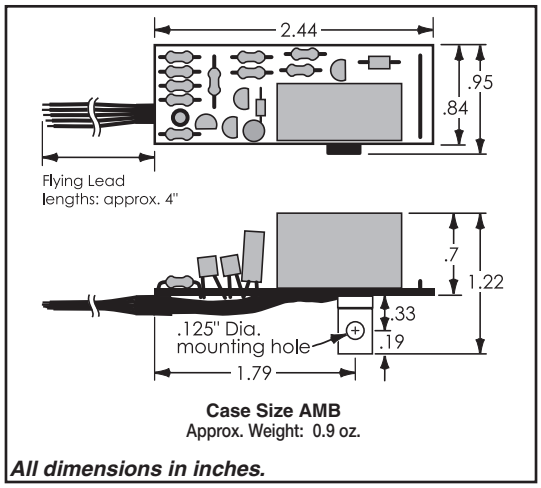
All dimensions in inches.

'Board with leads' UOV Monitor

Order model number AMB?? replacing the ?? with the DC voltage to be monitored.

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.

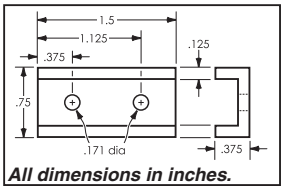


Case Size AMB
Approx. Weight: 0.9 oz.

All dimensions in inches.

WALL MOUNTING KITS

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.



All dimensions in inches.

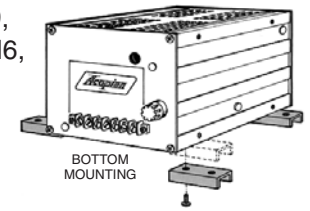
For 'Gold Box' and (modular) 'High Voltage' power supplies:

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, LM6A*, LM8A*, LM10A*, M6, M9, M13, RM6, RW6 TG5, TG6, TG9, TG13, TH11, WG7, WM6, WM9, Y3, Y5, Y6, YH11, YA

For rear mounting brackets horizontally on **LM cases only, use GBR Mounting Kit*



For 'Narrow Profile' power supplies:

NP6 Mounting Kit *(#6-32 mounting holes)*

Can be used on these case sizes:

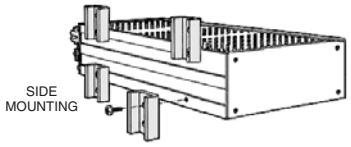
AMC, CN8T, DN6B, DN6A, DN8A, DN8, F6T, F8T, N8T, WL7, WL9, WN6A, WN6B, WN8, WN8A, WN8B, TN6T

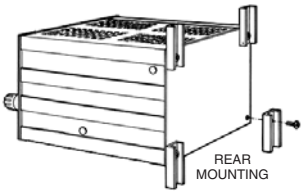
NP6L Mounting Kit *(#6-32 mounting holes)*

Can be used on these case sizes:

CN8H, N8H, TN8H

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





DIN RAIL MOUNTING KITS

CH35DIN Mounting Kit (Horizontal mounting)

Can be used on these case sizes: RM6, RW6

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				

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						

(GR35DIN can be used, but is not recommended on case sizes: G13, GT13, M13, TG13)

LR35DIN Mounting Kit (Rear mounting)
LV35DIN Mounting Kit (Vertical mounting)
LH35DIN Mounting Kit (Horizontal mounting)

Can be used on these case sizes: LM6A, LM8A, LM10A

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
					WN8B

NPR35DIN Mounting Kit (Rear mounting)

Can be used on these case sizes:

CN8H	F6T	N8H	TN6T
CN8T	F8T	N8T	TN8H

NPV35DIN Mounting Kit (Vertical mounting)

Can be used on these case sizes:

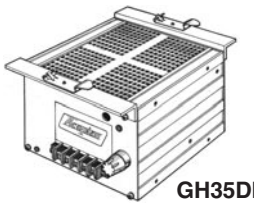
CN8H	DN6A	F6T	N8H	TN6T	WN6A
CN8T	DN6B	F8T	N8T	TN8H	WN6B
	DN8				WN8
	DN8A				WN8A
					WN8B

WH35DIN Mounting Kit (Horizontal mounting)

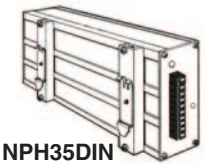
Can be used on these case sizes: WM6, WM9

WL35DIN Mounting Kit (Vertical mounting)
WLH35DIN Mounting Kit (Horizontal mounting)

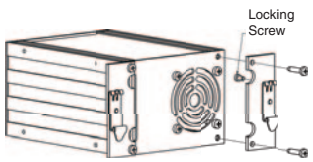
Can be used on these case sizes: WL7, WL9


GH35DIN

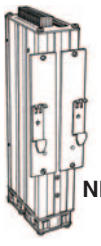

LH35DIN


NPH35DIN

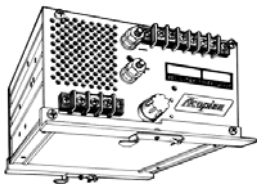

GR35DIN



LR35DIN


NPV35DIN


WLH35DIN


WH35DIN


NPR35DIN

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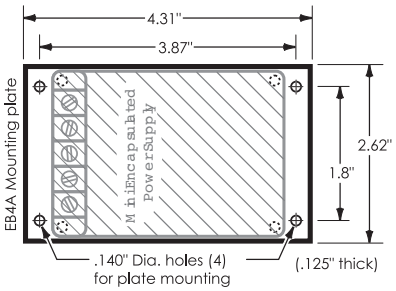
Mounting Kits for 'Mini Encapsulated - with screw terminals' power supplies:

WALL MOUNTING

Model EB4A

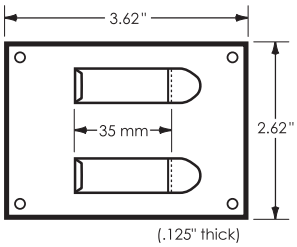
Use Mounting Kit EB4A to mount from the power supply side of the mounting surface, necessary when the other side of the mounting surface is inaccessible. This kit consists of an aluminum plate and four screws for attaching it to the power supply, effectively adding mounting flanges to any Mini Encapsulated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



DIN RAIL MOUNTING

Model EB35DIN

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

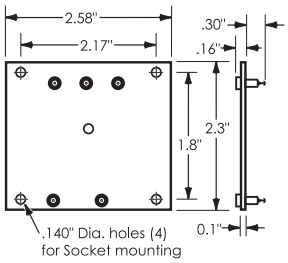


Sockets for 'Mini Encapsulated - PC Board mounting' power supplies:

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

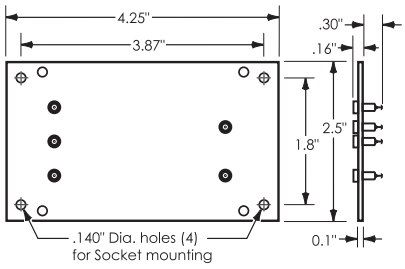
Model ES-1

For case sizes ES-10 and ESC-10



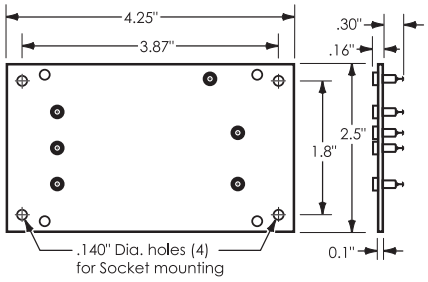
Model EL-1

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



Model ELW-1

For case sizes ELW-13 and ELW-20

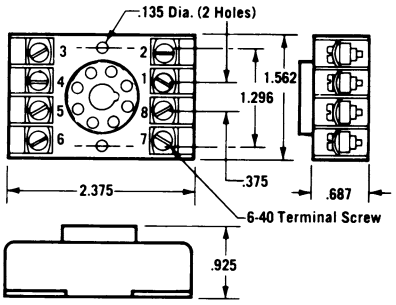


Sockets for 'Plug-In' power supplies:

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

Model SL608

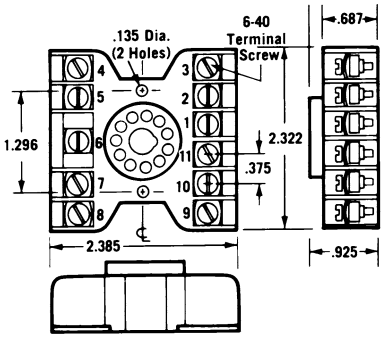
For 8-pin plugs.



All dimensions in inches.

Model SL611

For 11-pin plugs.



All dimensions in inches.

NEMA 4X Enclosed Power Supplies

We can put many of our power supplies in NEMA enclosures. Shown here is one of our Mini power supplies in a NEMA enclosure.

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.

Please contact Acopian for more information. **Call 800-523-9478.**

Acopian Technical Company
Easton, PA

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External Overvoltage Protector

These modules can be used with any manufacturer power supply between 5 Vdc and 150 Vdc.

- Five Year Warranty

These Overvoltage Protectors may be used as independent accessories for any power supply to prevent the output voltage from exceeding the trip point of the protector under any condition. When triggered, the protector short circuits the power supply output, causing the LED indicator to turn off. These modules can be used on power supplies with DC voltages of 5 to 150 Vdc. They are often used to protect integrated circuits and other sensitive loads. Typical applications set the OVP trip point .5 Vdc (or +15%, whichever is greater) above application voltage.

STANDARD FEATURES

- Reverse Connection Protection
- Noise Filtering
- Green LED 'ON' Indicator
- Small, lightweight

SPECIFICATIONS

Voltage Ratings: 5v to 150v.

Hipot to Case: 1500 VAC.

Isolation to Case: 500 VAC; 707 Vdc.

Cooling: Convection/conducted cooled.

Maximum Continuous Current, Short Term: 35A (< 1 minute @ 40°C, no heat sink).

Maximum Continuous Current, Long Term: 7A (@ 40°C, no heat sink).
35A (@ 25°C, heat sinked).

Maximum Pulsed Current: 100A for < 50ms.

Maximum Case Temperature: Temperatures above 90°C can cause device failure.

Mounting: Threaded mounting holes on two surfaces permit mounting to a chassis, cabinet wall or bracket.

Trip Point Tolerance: ±100 mV (5 to 10 Vdc); ±500 mV (11 to 50 Vdc); ±2v (50 to 150 Vdc).

Temperature Coefficient: ± 0.01%/°C (typical).

Ambient Operating Temperature: -20°C to 40°C (Derate max current 1%/°C to 71°C).

Trip Point Drift, Long Term: ± 0.02% or 10 mV, whichever is greater (typical), over 8 hours.

Trip Recovery Voltage: < 0.1% of trip voltage or 50 mV, whichever is greater.

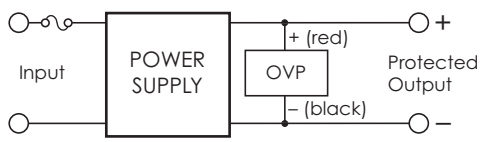
Response Time: 2ms (typical). Tested with voltage ramp rate of 3 Vdc/ms, typical linear power supply, no load, open sense response.

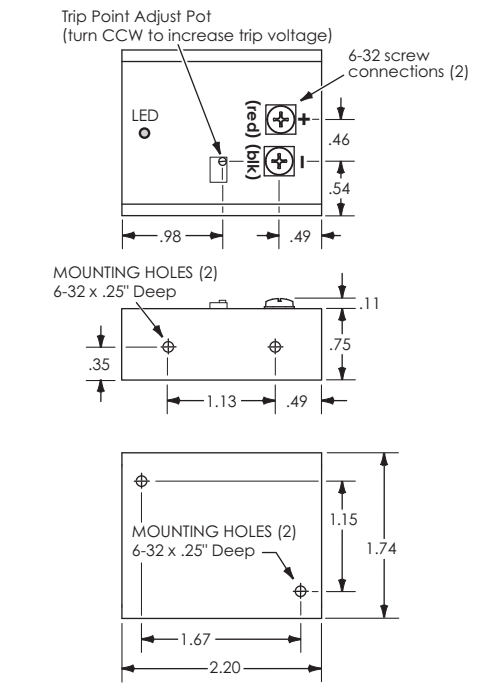
HOW TO ORDER:

Factory-Set Trip Point:
Order model number **EOVP–???.?** replacing the **???.?** with the desired trip point voltage.

Adjustable Trip Point:
If adjustable trip point is required, select one of three available OVP models:
EOVP–510 (trip point range 5 to 10 Vdc)
EOVP–1050 (trip point range 10 to 50 Vdc)
EOVP–50150 (trip point range 50 to 150 Vdc)

Simplified Wiring Diagram





Case Size EOC-1
Approx. Weight: 3.2 oz.

All dimensions in inches.

Over 1 MILLION 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.**

- For the model that you are looking for, replace the 'numbers' in that model number with the # symbol. Examples: To find model number A24H8500, use A#H#. To find model number 24EB60, use #EB# (The numbers(#), which indicate voltage and current, will vary depending on your particular model number. The letters do not vary.)
- Ignore V or 3V (Overvoltage Protection option) 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 option letters/numbers which may appear at the end of the model number you are looking for, such as: A,F,G,H,K,L,M,M3,P,R,S,T,Y,-230,-208,-100,-24, etc..

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

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

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

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

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

PRICES: The prices shown are F.O.B. our factory; Easton, PA or Melbourne, FL. ('EXW Factory' if outside the 50 United States.) All prices and specifications are subject to change without notice.

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

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

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

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

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

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. This option requires two additional days and is not available on High Voltage, Mini Encapsulated, Rack Mounting, and Gold Box Switching models.

TAGGING: Add $10.00 to price.

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

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

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

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

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

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

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

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

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

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

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

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

ACOPIAN IS AN ISO 9001 CERTIFIED COMPANY