



Infinity Rack & Benchtop

LINEAR REGULATED

AC-DC single & wide adjust output

• Five Year Warranty



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- Acopian power supplies last a *very long time!*
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Infinity Rack Mounting & Benchtop LINEAR REGULATED (to 1200 watts)

AC-DC

single output & wide adjust output

- 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: $\pm 0.01\%$ or 2 mA, whichever is greater.

Load Regulation:

- $\leq 27A$ models: $\pm 0.02\%$ or 4 mA, whichever is greater.
- $\geq 28A$ models: $\pm 0.04\%$ 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 $\pm 1\%$ of output setting. Maximum of $\pm 3\%$ 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 $+71^\circ\text{C}$. (Derate $1\%/^\circ\text{C}$ above 40°C .)

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

Temperature Coefficient (after 30 minute warm-up):

Voltage mode; $\pm 0.01\%/^\circ\text{C}$ (typical).

Current mode; $\pm 0.05\%/^\circ\text{C}$ (typical).



(handles, meters optional)

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; $\pm 0.1\%$ or 10 mV, whichever is greater.

Current mode (Wide Adjust models);

$\leq 27A$ models: $\pm 0.2\%$ or 50 mA, whichever is greater.

$\geq 28A$ models: $\pm 0.3\%$ or 75 mA, whichever is greater.

Drift, Long Term (@ 25°C):

Voltage mode; $\pm 0.03\%$ or 10 mV, whichever is greater, over 8 hours.
Voltage mode; $\pm 0.05\%$ or 20 mV, whichever is greater, over 1000 hours.

Current mode, over 8 hours;

$\leq 27A$ models: $\pm 0.02\%$ or 20 mA, whichever is greater.

$\geq 28A$ models: $\pm 0.03\%$ or 30 mA, whichever is greater.

Current mode, over 1000 hours;

$\leq 27A$ models: $\pm 0.02\%$ or 10 mA, whichever is greater.

$\geq 28A$ models: $\pm 0.03\%$ 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.

<u>Dielectric Withstand Voltage</u>	<u>Isolation</u>
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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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.)

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OPTIONS (continued)

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" 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.

G3; Front Panel Mounted Green LED Output Indicator (DC on) (Single Output models)

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, $\pm 0.2\%$ Line and $\pm 0.2\%$ 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

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 Voltmeter accuracy is 0.5% ± 1 LSB; current meter accuracy is 1% ± 1 LSB.

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OPTIONS (continued)

R1; Resistive Programming

Output voltage and current may be programmed from 0 to rated output. Programming: ohms per volt out = $10k \div V_{Rated} \pm 5\%$. Program resistors are connected from 'V pgrm' to '-Sense' and 'I pgrm' to '-Rtn'. (Not available with options C1, C2, C5, C6, G1, G2, G5, J3.)

S; Chassis Slides

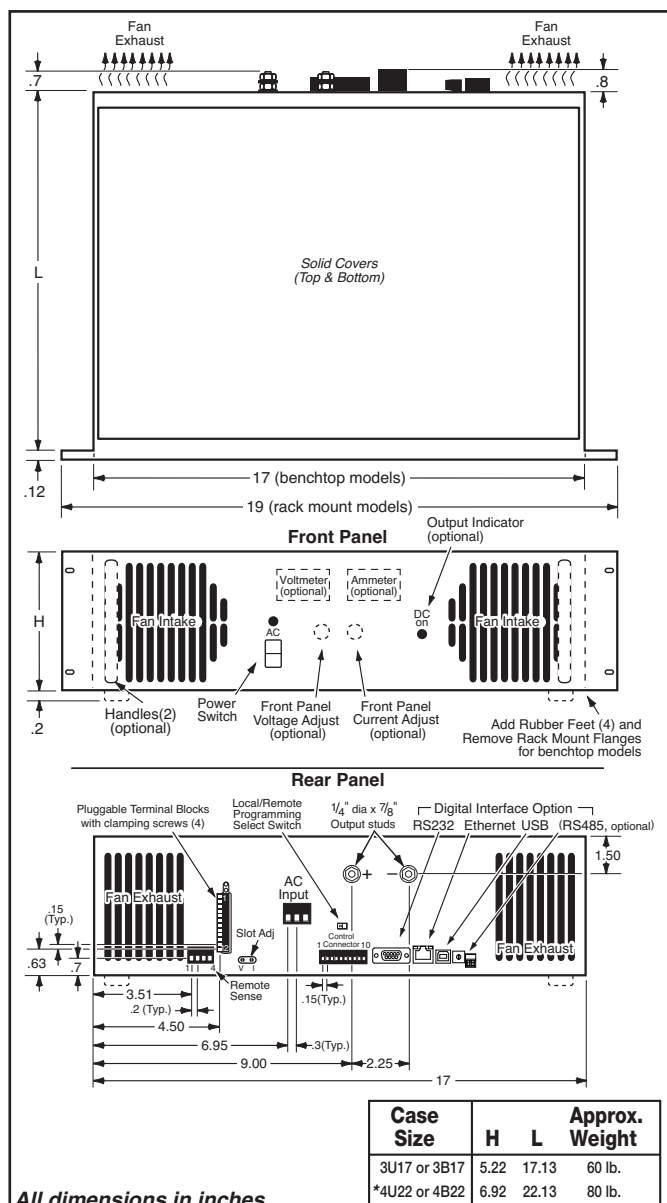
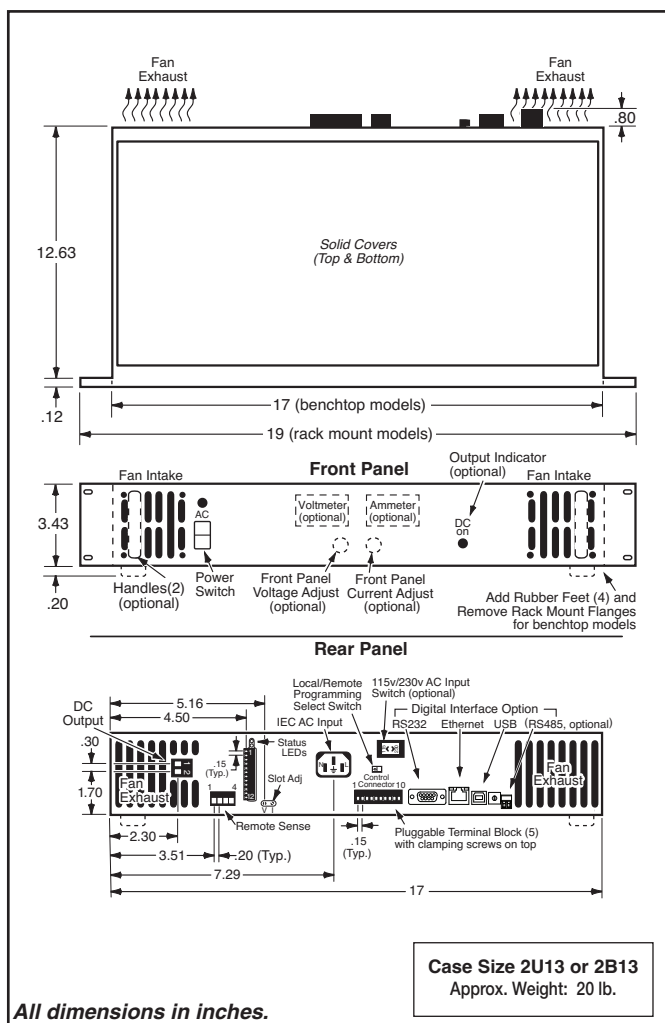
For racks having rear mounting rails spaced 18" to 24" behind the front panel.

How to Order:

There are a seemingly infinite number of options available for the Acopian Infinity Rack Mounting and Benchtop 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 **C8** are selected, the suffix on the model number is **C38**, denoting options **C3** and **C8**.

For example, power supply model Y05LC2U2640 with options **B6**, **C3**, **C8**, **E1** and **G5**: This model number would be Y05LC2U2640**B6C38E1G5**.



*NOTE: Slides or rear support brackets required when mounting case size 4U22.

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, procurement, 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