

ACT2500 - Smart Power Conditioner™

USER-CONFIGURABLE POWER SEQUENCING

A Complete Power Management Solution For Demanding Applications

With the Smart Power Conditioner™, Acumentrics continues to provide innovative, rugged, reliable power solutions that meet the rigorous needs of soldiers in the field of battle around the world. End-users can rely on these for vehicle and C4ISR applications to work under hazardous conditions in the most austere, constrained and degraded situations.

The Acumentrics Smart Power Conditioner provides 2000W of configurable AC or DC output from 80 VAC to 265 VAC / 47 Hz to 440 Hz or 22 VDC to 32 VDC. True Worldwide Input™ enables users to harness power from field generators, vehicles and any international power standard. This durable and versatile power conditioning system contains advanced double on-line conversion to provide highly reliable power conditioning for the most sensitive electronic devices.

Power Sequencing on Start-up and Shutdown

Unlike User configurable GUI allows easy programmability of each output in the necessary start-up or shut down sequence. Eight outputs can be configured to control operation of the associated equipment in the network in the set order at the specified time. This feature is ideal for systems with multiple routers and servers that must come online in sequence.

One-button Push Mode Setup

The system can be programmed with a single button to ensure that the appropriate systems are powered or not for the specific mode of operation (battle mode, silent watch, etc.)

Situational Load Shedding

The Smart Power Conditioner can be programmed to shed the power of everything, but essential equipment should the system experience reduced or loss of primary power.

Channel Paralleling

To support high current loads the system enables paralleling of 8A, 10A and 25A channels – essential for mission critical applications.

Automatic Shutdown During Vehicle Rollovers

Acumentrics' Power Conditioners automatically sense the orientation of a vehicle and can be programmed to shut down power or send a trigger signal in the event of a rollover. This patent-pending design feature is uniquely offered in Acumentrics power conditioners.

Power Factor Corrected

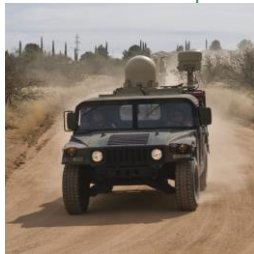
The Smart Power Conditioner accepts a wide range of voltages and frequencies, while providing clean, reliable AC and DC power as well as seamless switching from AC shore power to DC power to the internal battery.

On-Line Double Conversion

True on-line, double conversion Smart Power Conditioners continually create a pure AC sine wave or DC output from an isolated DC output. This protects sensitive equipment from input surges, spikes, brownouts, blackouts, and noise.

Lightweight Aluminum Chassis

The Smart Power Conditioner is housed in a compact, lightweight chassis. All-aluminum, welded construction minimizes overall weight of the unit while maintaining high durability.



**RUGGED
RELIABLE
POWER™**

Features of the Smart Power Conditioner include: power sequencing that helps to ensure reliable communications at all times; power that automatically shuts down during a vehicle rollover; and a one button programmable output power system that runs quiet with no visible lights.



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Contact
Acumentrics
to discuss
customized
solutions.

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OPTIONS

DC Output: 12, 24, 28 or 48 VDC Output
Basic unit offers up to 500W of DC with remaining output AC. Other wattages available with customized units.

INPUT SPECIFICATIONS

Input AC Voltage: 80-265 VAC, single phase
Frequency: 47-440 Hz
AC Input Circuit Breaker Rating: 40A
DC Input Voltage: 22-32 VDC
DC Input Circuit Breaker Rating: 150A
Maximum DC Current: 120A
Input Power Factor: 0.99 typical
Efficiency with 2000W load:
AC-DC $\eta = 0.86$
DC-DC $\eta = 0.82$

OUTPUT SPECIFICATIONS

Continuous Output Power: 28VDC, 72A, 2000W
Peak Output Current: 100A Max
DC Output: 2000W, 28 VDC +/- 2%
DC Output Circuit Breaker Rating: 120A
Ripple: <200mVpp, 20 MHz bandwidth, at full load
Total Harmonic Distortion: <1% with 2000W resistive load

ENVIRONMENTAL

Operating Temperature: -32°C to 66°C
Storage Temperature: -50°C to 66°C
Humidity: 10% to 95% (non-condensing)
Altitude: 0 to 15,000 ft operating,
0 to 40,000 ft non-operating
Rain: operates in blown precipitation

STANDARDS

EMI : MIL-STD-461-F : RE102, CE102, CS101,
RS103, CS114
Shock: Packaged MIL-STD-810-G Method 516.4 IV,
VI Operating MIL-S-901-D, grade A, class II, type B
Vibration: MIL-STD-167-1, type I vibration MIL-
STD-810-F Cat. 8, Procedure I
Shipboard: MIL-STD-1399 Section 300A
Vehicle: MIL-STD-1275-D

BATTERY SPECIFICATIONS

Battery Type: LFP Modules
Typical Run Time: 15 seconds full load
Recharge Time: 4 hours to 90%

MECHANICAL

Chassis Size (H x W x D): 7" x 12" x 21"
Envelope size (H x W x D): 7" x 12" x 22.75"
Weight: 50 lbs
Connectors: (MIL-C-5015 type)
AC Input: CA02COME22-2PB
DC Input: CA02COME28A16PB
DC Output: CA02COME10SL-4S-P

DDC CARD SPECIFICATIONS

- Total Module Current Capability of 72A
- Instant Trip and I2t & Protection with Thermal Memory
- Controlled Rise and Fall Times
- Continuous Built in Test (BIT)
- Trip Override (Battle) Mode
- SAE J1939 compatible CAN Interface
- Load Current, Voltage and Temperature Monitoring
- Alarms for Out-of-Range Voltage, Current or Temperature
- Power on sequencing with delays from 0 second to 300 seconds

Protects sensitive equipment from surges, spikes, brownouts, blackouts, noise

- Easy to maintain
- Wide Operating Temperature Range
- Easy to monitor