



FEATURES

- **Output Voltages from 24 to 270 VDC**
- **Wide Input Range (96-264 VAC)**
- **Rugged for Mobile Environments**
- **Power Factor Corrected**
- **Lightweight Solid State Design**
- **Temperature Compensated Output**
- **Battery Equalize Program**
- **MIL Qualified**

PRODUCT OVERVIEW

The BCE Series from TDI - Advanced Conversion Products is a line of rugged solid state regulated DC power supplies designed for severe applications. The BCE incorporates active power factor correction and features an ultra-wide AC input range of 96V to 260V AC, 40Hz to 440Hz. Single and poly-phase input models are available. Standard output voltages range between 24 and 270VDC.

Battery Charger options include an equalize cycle to restore "drooping" cells in a battery array and help extend battery life. The Charger Option includes automatic temperature compensated output to assure optimum battery charging voltage over a wide temperature range.

The BCE Series includes models nominally rated at 1.25kW, 3kW, and 6.5kW. Enclosure options include 19 inch rack mount, modular and universal shelf mounts. The 3kW BCE is under 33 pounds and is approximately 7" X 9" X 17". Units are cooled by internal fan. An output steering diode permits two or more BCE Power Supplies to operate in parallel redundancy, providing power systems up to 50kW

Mounted on HMMWV and Track Vehicles, BCE Power Supplies have passed Munson Road and Rail Impact Tests. Other qualifications include MIL-STD-810 ground mobile shock & vibration, salt-fog, sand & dust, and humidity exposure.

The BCE Charger and ACE Series Inverters form the building blocks of our rugged MIL-UPS Uninterruptible Power Systems.

Robust Systems For Critical Applications

TDI - Advanced Conversion Products

85 Horsehill Road • Cedar Knolls, NJ 07927 • Phone: 973.267.1900 • Fax: 973.267.2047 • www.tdipower.com

UNIT SPECIFICATIONS**INPUT**

Nominal Input: 96 to 264VAC Line to Line
Single and / or Three-Phase
47Hz to 66Hz (440Hz optional)
Power Factor: > 0.98 (single phase inputs)
Under Voltage Protected
Overvoltage Protected

OUTPUT

Voltage Options: 24, 36, 48, 120, 270V DC
Regulation: 1% Line and Load
Ripple & Noise: 0.7% P-P 10mHz bandwidth
Fully Isolated via double conversion topology

POWER RATING

1.25kW, 3kW, and 6.5kW Models

EFFICIENCY

83% Min. Half Load to Full Load
100 Watts No Load

INDICATORS / CONTROLS

Input Available
Normal / Fault
Equalize Initiate (option)

PROTECTION

Output Short Circuit
Overvoltage
Overcurrent
Overtemperature

ENVIRONMENTAL

Cooling: Internal Fan(s)
Operating Temp: -35° to +55°C (to 71°C derated)
Altitude: 12,000 operating
Vibration: 15-2000Hz, 0.01G²/Hz PSD
Shock: 15G 11msec half sine shock pulses

RELIABILITY

MTBF: Demonstrated mean time
between failure exceeds 200,000 hours

MECHANICAL

I/O Connectors: MS Series
Weight: 33 lbs (3kW Model)
Size: 9"W x 7"H x 17"D (3kw)

BATTERY CHARGER OPTIONS

Equalize Cycle: Programmed 4 to 6 hour
EQ and Return to Float Temperature
Compensation: -3.9mV per °C per 2V Cell

OTHER ACP PRODUCTS

Advanced Conversion Products creates high performance, robust AC and DC power systems for mission critical applications in telecommunications, industrial, rapid transit, airborne, ground mobile and shipboard environments. Uninterruptible back-up power and critical system control are "the sine of perfection" from ACP.

Special technologies include modular lightweight, high performance sine wave inverters, rugged AC-DC and DC-DC converters, AC frequency changers and Uninterruptible Power Systems.



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Note that the exact product shown on this data sheet may not be available for purchase due to prior contractual obligations. Please contact TDI for current available products or to discuss a modification to an existing design.

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