



BC1300 Series

Main Ship Battery Chargers

Designed for rapid operator payback, the BC-1300 Series of Main Ship Battery Chargers significantly reduces battery and charger maintenance while eliminating the guess work of identifying and solving battery/charger problems. Securaplane's new, innovative battery chargers utilize advanced DC to DC conversion technology, patented charging algorithms, comprehensive diagnostics and fault isolation.

Old technology chargers typically gauge the charge time based solely according to the cell voltage. This has led to either over-charging or under-charging the battery, with resulting water loss and increased maintenance.

Models Available:

BC-1300/1303: DC-9, MD-80 Series (Using SAFT or Marathon main ship batteries)

BC-1301/1304: Canadair RJ-200, Challenger 604, Bombardier RJ-700

BC-1302: DC-10, MD-11 and MD-10

Retrofit Applications:

Variants of the BC-1300 are available for both AC and DC aircraft. BC-1300 Series chargers reduce battery maintenance while providing significant maintenance data on battery and charger.

Advantages:

Patented Battery Charging Method:

Securaplane® has developed a method for accurately detecting

the "inflection point" - a feat that has eluded battery experts for years and is critical in reducing overcharge and boiling of electrolyte. The algorithm was developed with SAFT involvement and concurrence. This method of charging ensures that the battery received the optimum amount of charge for all temperature conditions combined with various battery states of charge. Securaplane® was awarded patent number 5,780,994 for this method.

Reliability:

Many of today's battery chargers are dependent upon fanless ambient convection cooling - which in most aircraft is inadequate to maintain charger semiconductor components at suitable temperatures for extended life operation. This is a risky design process considering that semiconductor reliability halves for each 10°C rise in ambient.

Securaplane® has found that a "proven" high reliability fan, used only on demand, provides and overall improvement to charger reliability, while significantly decreasing charge weight and volume.

Fault Storage:

The BC-1300 Series store every fault including battery over temperature, cell unbalance, defective temperature sensors, defective charger- battery connection and GMT time/date of fault period.

Extensive Diagnostics with

Alphanumeric Display: Microprocessor provides status and permanent memory of faults with readout to self contained (10) digit display.

Tsense2... 40.0Amps... Tempdiff... Cell
BatTemp... Volts... Trickle... Cleared
Amps... Time... Fault... Bulk



BC1300



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Models Available:

BC-1300 (P/N 100-0205-01) (DC-9, MD-80 Series)

- Size: 5.60" x 4.90" x 8.64" (Max)
- Weight: 7.2 lbs.

Connectors

- MS27335T14A18P (or equivalent)
- MS3452W20-14P (or equivalent)

Input Power Requirements

- Aircraft 115VAC 3 Phase 400 HZ (102-124 VAC Operating)
- Efficiency 85%-89%
- Low input power distortion

Output Power

- Max output current 40 Amps @ 30V
- Max output voltage 36VDC @ 33A

BC-1301 (P/N 100-0211-01) (Canadair RJ-200, Challenger 604)

- Size: 4.30" x 4.90" x 8.90" (Max)
- Weight: 5.1 lbs.

Connectors

- Same as BC-1300

Input Power Requirements

- Same as BC-1300

Output Power

- Same as BC-1300

BC-1302 (P/N 100-0212-01) (DC-10, MD-11 and MD-10)

- Size: 4.76" x 4.85" x 10.60" (Max)
- Weight: 7.5 lbs.

Connectors

- MS85528/2-22-A01-A
- Bussmann C2808-1
- Bussmann C4044

Input Power Requirements

- Same as BC-1300

Output Power

- Same as BC-1300

BC-1250 (P/N 100-0210-01) (DC Aircraft)

Approximate dimensions:

- Size: 5" x 5.5" x 9"
- Weight: 6 lbs.

Connectors

- MS3102E24-10P (or equivalent)
- MS27508E14A18P (or equivalent)

Input Power Requirements

- Aircraft 28.5 VDC nominal (22-32 VDC Operating)
- Efficiency 85%-89%

Output Power

- Max output current 40 Amps @ 30V
- Max output voltage 36VDC @ 33A

Other Specifications

Fault Display Status:

Charger Faults

- Fan Speed
- CPU
- Temperature
- Voltage
- Current
- Power
- Stored Fault History

Diagnostics

- Self Test
- Output Voltage
- Output current
- Operating Hours
- Temperatures
- Power

Battery Faults

- Abnormal temperature
- Temperature sensor circuit
- Cell unbalance sensor unit

Time

- Date
- Software revision

LED Display

- 8 character alpha-numeric

Charge Mode

- Bulk Charge Mode
- Topping Charge Mode
- Trickle Charge Mode



BC-1301

Used on Canadair RJ-200 and Challenger 604



BC-1302

Used on DC-10, MD-11 and MD-10



BC-1250

For DC Aircraft