



Emergency Battery System

XL500 Series

Securaplane's XL500 Series Emergency Battery Systems are the most technically advanced ¼ ATR battery packs available today. The XL500/5 has been selected for the Raytheon (Beech) Premier 1 aircraft and is similar in concept to Securaplane's very reliable XL246 (thousands in use) series of Emergency Battery Systems currently in use on Gulfstream III and IV, Canadair Challenger, Falcon, and other aircraft.

The XL500 Series includes the XL500/5 and the lighter weight, lower capacity XL250/5. The XL500 Series replaces all BFG (JET) units which do not require A/C input.

No need to remove batteries from aircraft to perform capacity check.

Applications:

- IRS/INS/3rd Standby Attitude Reference System Back-up Power
- Emergency Lighting
- Bus "hold-up" during engine start

Battery:

Sealed Lead Acid (SLA) Batteries provide longer life and better reliability than Ni-Cads in emergency backup (float) power applications, especially in an elevated temperature ambient. *However, SLA batteries are only half the equation to long battery life and guaranteed performance. The other half is the built in charger...*

Built-in Battery Charger:

Dual charging mode, constant current bulk and constant trickle, charges and operates from aircraft 28 VDC power bus. Contains overheat protection, built-in test and overload protection. Battery will reach 80-90% energy capacity in one hour. Charging voltage is temperature compensated depending on battery ambient temperature. Comparable batteries (without a charger) may take up to 30 hours to reach 100% while charging off a 28VDC bus.

Battery Test:

Battery test function, places a known load on the battery, compensates for battery temperature, then measures battery energy. The LED indicates "Test Low" at energy levels at or below 65% and "Test OK" above 65%. No need to remove from aircraft to perform capacity check.

Diagnostics:

Continuous BIT monitors charger/control logic, battery cell voltage and battery heater circuit. Front panel mounted test switches and eight digit LED display facilitate on-airplane testing. Tests can also be initiated via cockpit mounted test switch.

Environmental Control:

In cold ambients, thermal blanket automatically activates to heat battery to 60° F temperature for guaranteed maximum energy.

Instrument Lighting Output:

Separate (adjustable) converter output (2.5-5.5 VDC, 25 Watt) suitable for cockpit lighting applications.

Advantages:

- Computer controlled circuitry with discrete circuitry backup for complete redundancy.
- Built-in charger to insure peak charge state.
- No deep cycling.
- No "Memory" characteristics.
- Low cost battery replacement.
- Full 3 year warranty on batteries.
- Full 5 year warranty on electronics.
- Built in test equipment—no need to remove from aircraft to perform capacity check.



XL500/5

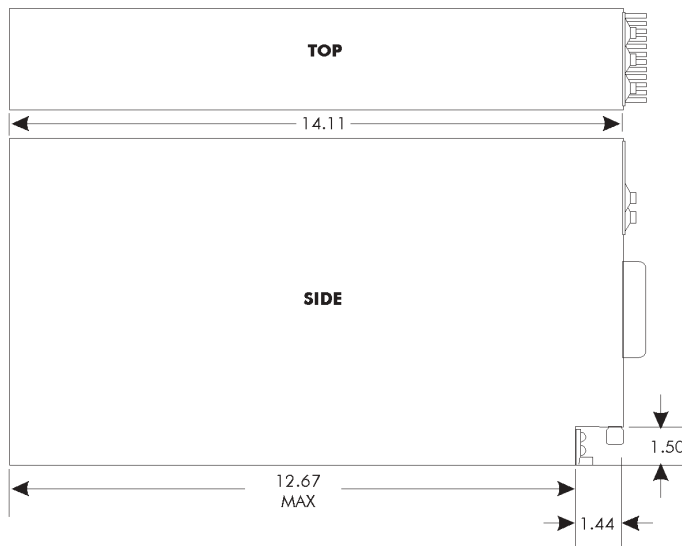
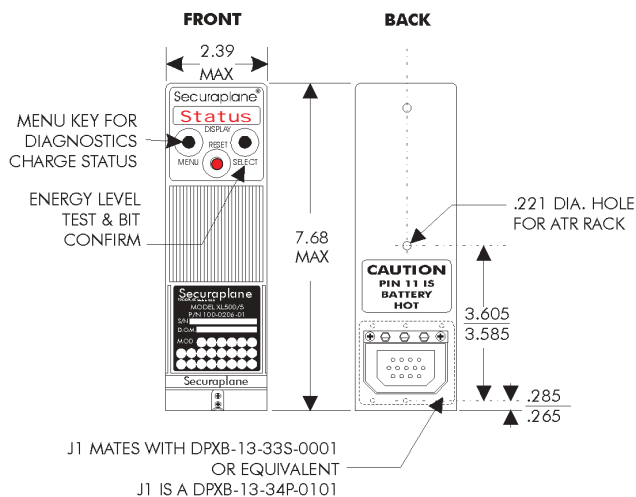
XL250/5

Information is subject to change. Please contact Securaplane for current information.



XL500 Series

Emergency Battery System



Physical Characteristics:

Size: ARINC 404, ¼ ATR – 7.62 x 2.3 x 14.11 inches (max)

Connector: ARINC 404 DPXB-13-34P-0101

Qual: DO 160C

- 4(F2), 5(B), 6(C), 7, 8(C), 10(W), 12(D), 13(F), 14(S), 15(Z), 16(Z), 17(A), 18(Z), 19(Z), 20(W,R), 22(B3), 24(A)

Weight:

- XL500: 14.3 LBS. (max)
- XL250: 10.2 LBS. (max)

Transportation: Dry cell classification by DOT

Functional Characteristics:

Power Characteristics:

Input Power:

- 18-36 VDC (28 VDC Nominal)
- 12A max (Battery charge + Lighting + Heater Blanket)

Battery Output at 24 VDC nominal:

- XL250: 2.5A for 40 minutes
Will feed 7 ohm load (3.3 amp nominal) for 60 minutes or constant 3.5 amps for 60 minutes
- XL500: 5A for 40 minutes
Will feed 14 ohm load (1.7 amp nominal) for 60 minutes or constant 1.8 amps for 60 minutes

Lighting Converter Output:

- Adjustable 2.5 - 5.5 VDC 25 Watts

Signal Inputs:

- Cockpit test S/W initiates BIT and capacity test from cockpit

Fault Outputs from Processor:

- Charger Fault, Battery Fault, Heater Fault, Converter Fault, CPU Fault, Over-Temperature Fault

Alphanumeric Display Functions:

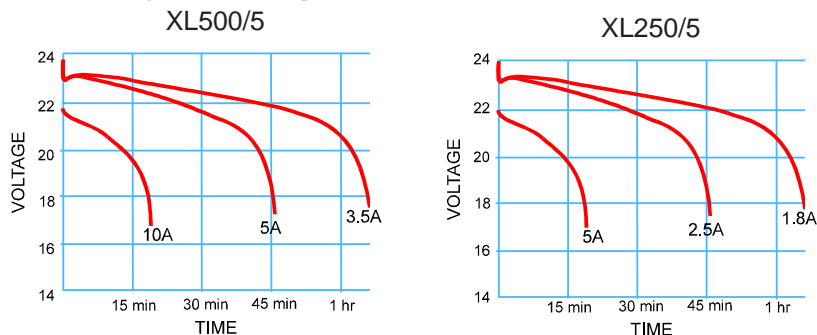
- Stores fault for later trouble-shooting
- Charge mode indication of bulk or trickle charge
- Indicates battery charge level, charge current, temperature and voltage output
- Displays Elapsed Total Time of power applied

Output Interconnect:

XL500/5 & XL250/5

J1	Emergency Power Unit
1	RESERVED
2	TEST SWITCH
3	RESERVED
4	SPARE
5	+5DC OUT
6	TEST LAMP
7	PWR GND
8	SPARE
9	CONV. +28VDC IN
10	+28 VDC IN
11	+24/28 VDC OUT
12	PWR GND
13	CONV. +28VDC IN

Battery Discharge Rates:



Securaplane XL500 Series:

- XL500/5
3.5 AH at one hour rate with emergency lighting
5 VDC output
(P/N 100-0206-01)
- XL250/5
1.8 AH at one hour rate with emergency lighting
5 VDC output
(P/N 100-0208-01)

