



Emergency Battery System

XL249

Securaplane's XL249 Emergency Battery System has been selected by Gulfstream for the Gulfstream V aircraft. This system is used to provide emergency power for: Lighting, 28VDC bus back-up and Flight instrumentation. The XL249 provides 9 amp hours of power at 18 to 24 VDC measured at the one hour discharge rate.

No need to remove from aircraft for capacity check

Advantages

- Built-In Test Equipment
- No Deep Cycling
- No "Memory" Characteristics
- Inexpensive Battery Replacement
- **No Need to Remove for Capacity Check**

Applications

- IRS/INS Back-up Power
- Avionics Back-up Power
- Emergency Lighting
- Emergency Bus Back-up
- Converts 115 VAC at 400 Hz to DC

Batteries

Sealed Lead Acid batteries (Dry Cells) provide excellent performance in extreme conditions. Battery compartment is designed for easy battery change by maintenance shops. Six month storage capability and no scheduled maintenance.

Battery Charger

Precision charges battery from aircraft 115 VAC 400Hz power bus. Unit has the capability to operate in bulk or temperature compensated constant voltage charge modes. Contains overheat protection, built-in test and overload protection. Battery will reach 80-90% full charge from a fully discharged state in one hour.

Battery Test

Battery test function, places a known load on the battery and measures the terminal voltage on load over 60°F. Indicates low, mid or full battery level. **No need to remove batteries to perform capacity check.**

Diagnostics

Continuous BIT monitors charger/control logic, battery cell voltage and battery heater circuit. Front panel mounted BITE software exercises BITE circuits. Works in conjunction with battery level test to validate capacity check.

Environmental Control

Thermal blanket automatically controls battery ambient below 60°F to optimize battery performance.

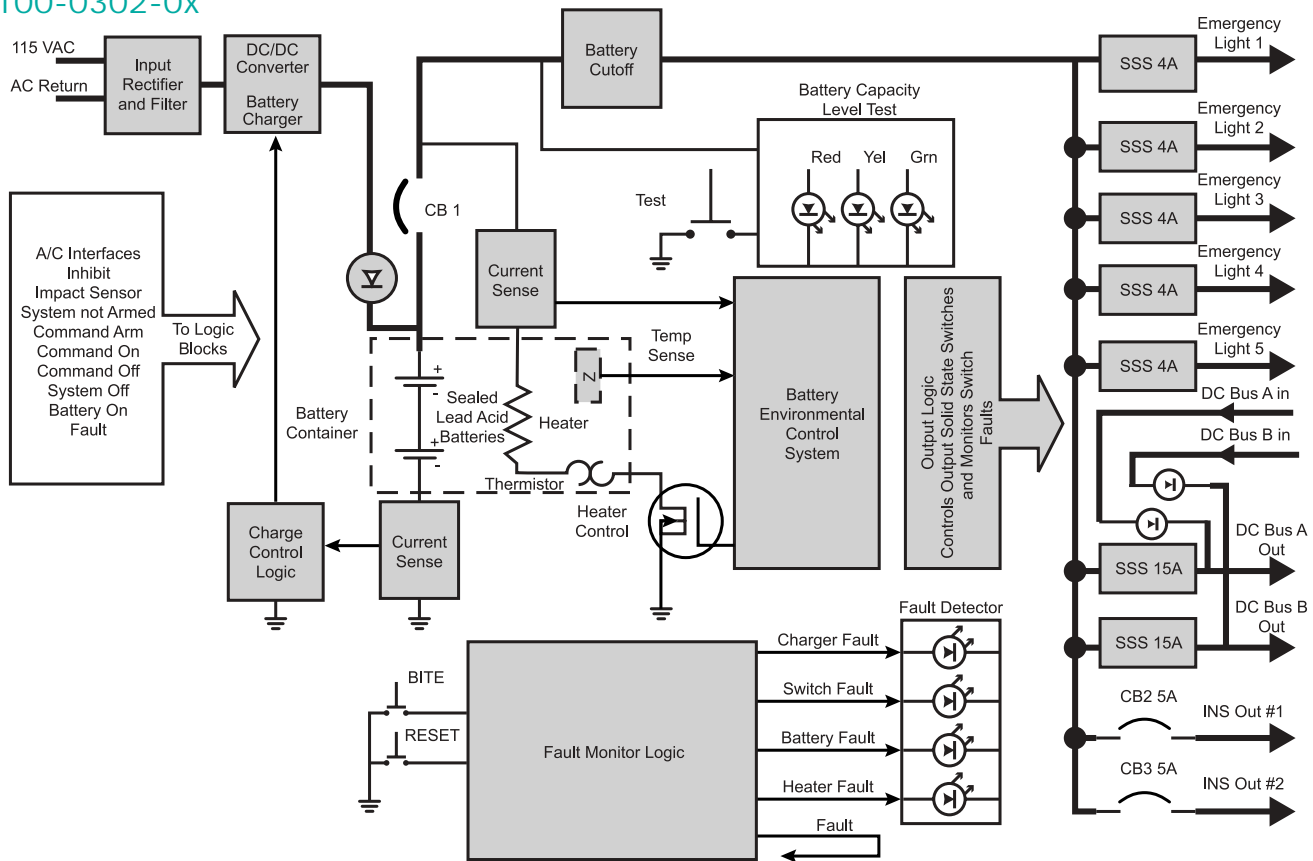
Solid State Switching

Battery outputs controlled by solid state switches capable of controlling (5) individual outputs. Each switch output has overcurrent protection and is checked by BITE.



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System Block Diagram P/N 100-0302-0x



XL249 Physical Characteristics

Size: ARINC 404, ½ ATR short. (8.63 x 4.88 x 15 inches) max
 Box Connector: ARINC 404 DPXBMA-67-34P-0168 Cannon or equivalent
 Qual: DO-160 and HALT tested -15 to +55C -55 to + 71° C (55,000 ft)

Weight: 29 lbs. (max)
 Mounting: ½ ATR short tray
 Cooling: Convection (No forced air)

XL249 Functional Characteristics

| Signal Inputs | | Power Characteristics |
|-------------------------------|--|---|
| Inhibit (+28 VDC) | Inhibits charge function. Enables A/C systems to check EM battery voltage. | Input Power 115 VAC 400hz 6A, DO 160C (500w max for charger, 150w for heater) Emergency Lighting Outputs (11 A for 40 minutes at 24 VDC nominal) 1. 4 Amp solid state s/w with current limit. 2. 4 Amp solid state s/w with current limit. 3. 4 Amp solid state s/w with current limit. 4. 4 Amp solid state s/w with current limit. 5. 4 Amp solid state s/w with current limit. Emergency Power Outputs (13A for 30 minutes at 24 VDC nominal) 6. 5 Amp circuit breaker output. 7. 5 Amp circuit breaker output. 8. Aircraft Emergency Bus A and B fed through the Emergency Batter System (EBS). If A or B buses fail, bus A is fed from a 15A solid state S/W and Bus B is fed from a 5A solid state S/W. The EBS system is intended for dual use as either: (a) Emergency Lighting System in which outputs 1-5 are utilized. (b) Emergency Power System in which outputs 6,7 and 8 are utilized. Battery Pack. 24 V.C.9AH (at 1 hr rate). Sealed lead acid (Dry). |
| Impact sensor (grnd) | Battery system activated regardless of other commands. | |
| Command on (grnd) | Battery system connected to loads. | |
| Command arm (grnd) | Activates battery system when A/C bus A or B is below 20 V.C. | |
| Command off (grnd) | Battery outputs off line. Charger continues to function. | |
| Signal Outputs | | |
| System off (1 A sink to grnd) | Indicates system is off line. | |
| Systems not armed (as above) | Indicates system is not armed. | |
| Fault (as above) | Indicates a system fault. Fault details displayed on unit front panel. | |
| Battery on (0.5A source) | Indicates system is off line. | |

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