Emergency Power Supply

JET® Model PS-835

Part Number 501-1228-( )

Installation Manual

This manual contains installation instructions and recommended flightline maintenance information for the PS-835 Emergency Power Supply. This information is supplemented and kept current by revisions, service letters and service bulletins.

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Description

1. General

This manual provides description and operation instructions for Models PS-835 A through G Emergency Power Supplies, Part Numbers 501-1228-01 through -07 (respectively). Models C, D, E, F, and G are current and Models A and B are considered ***obsolete***, see Service Bulletins and Modifications Table 1.

Model Number	Part Number	Cell Type
A	501-1228-01	2.5Ah
B	501-1228-02	5.0Ah
C	501-1228-03	2.5Ah
D	501-1228-04	5.0Ah
E	501-1228-05	2.5Ah
F	501-1228-06	5.0Ah
G	501-1228-07	5.0Ah

2. Purpose of Equipment

The Model PS-835 Emergency Power Supply is designed as a 24 Vdc (nominal) emergency power source for prolonging the operation of a connected standby attitude indicator when the aircraft main power buss has de-energized. The aircraft main power buss provides trickle charging to the PS-835 while the aircraft performs normally.

The output of the PS-835 can be subsequently converted using either Avionics Systems Model SI-100( ) Static Inverter or the SC-841 Static Converter to provide power for standby indicators of different power requirements.

The SI-100 provides outputs of 115 Vac or 5 Vac, 400Hz either at single or three phase alternating current. The SC-841 provides direct current outputs of 2.0 to 6.5 Vdc (user adjustable).

3. Physical Description

The PS-835 Emergency Power Supply is fully enclosed unit, designed to easily mount onto an existing avionics shelf or the optional ATR mounting rack (Avionics Systems part number 572-1424-01). The face of the unit provides individual cell monitor LED's, voltage output monitor LED's, battery Heater Operation Monitor LED's, and a battery test switch to assist in assessing the condition of the unit and cells.

4. Functional Description

A. Power Input

Aircraft 28 Vdc is connected to the emergency power buss through pin 10 of connector J1. The input is diode isolated from the internal batteries and circuits to prevent battery discharge in the event of a short circuit, or battery draw caused by low input from the aircraft main DC buss, such as at engine start.

E. Cell Voltage Discharge Time

Figure 4 displays typical discharge curves at room temperature. At -55°C an internal heater blanket maintains the cells at no lower than 0°C for the "X" type cells and 20°C for the "S" type cells. A typical discharge rate with the cells at 0°C reduces the capacity by approximately 15%.

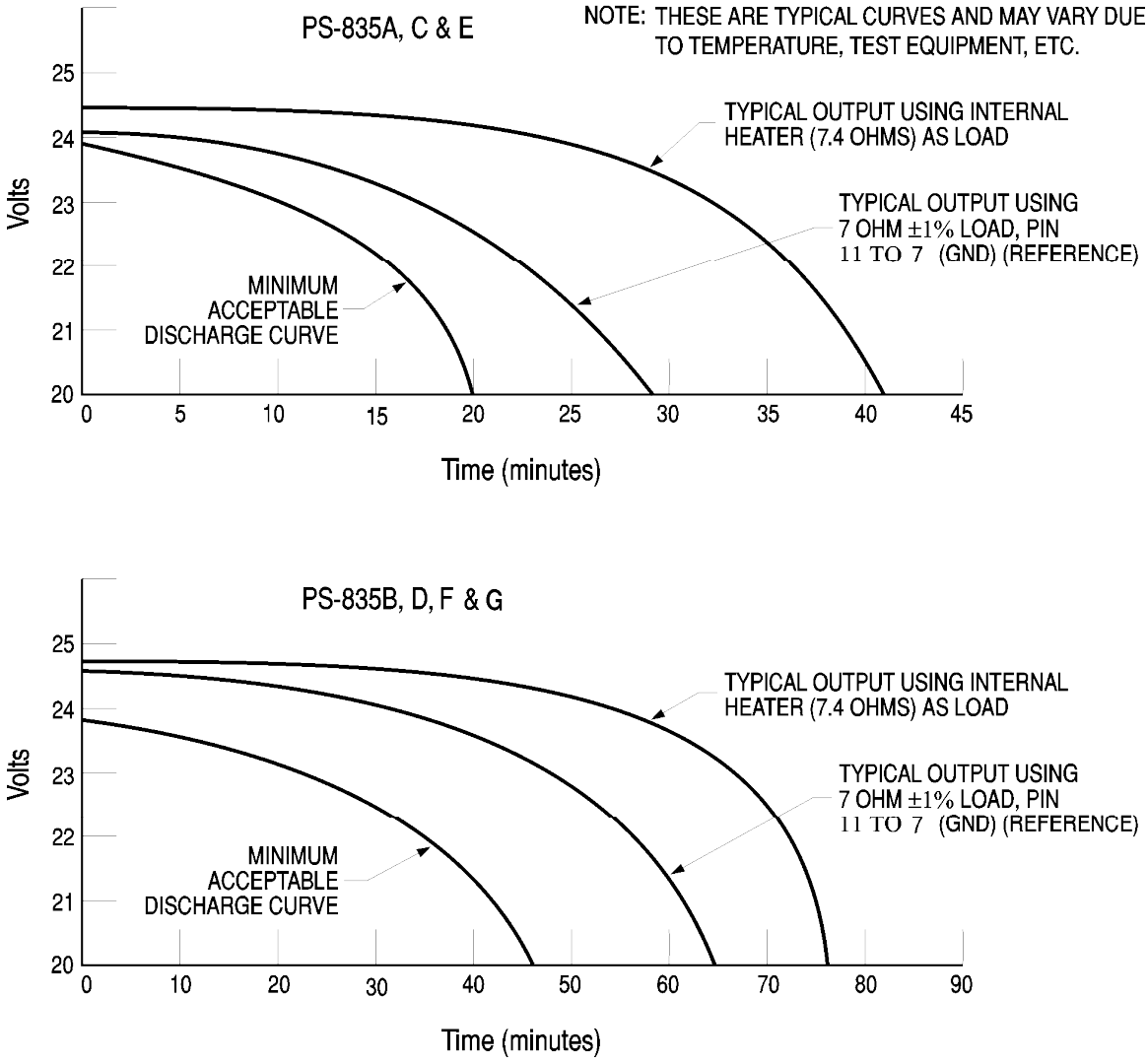

Figure 4: PS-835( ) Discharge Curves