

CAMAC POWER SUPPLY MODELS 1410S/1510

1.0 GENERAL DESCRIPTION

The Model 1410S and 1510 power supplies are designed for use with the CAMAC Modular Instrumentation System for Data Handling. The 1410S and 1510 supplies are combined units providing both power and cooling air to the system electronics. The performance specifications of the Model 1410S and 1510 meet or exceed the intent of the draft titled "Specification for a Typical CAMAC Power Supply", by the U.S. CAMAC Mechanical and Power Supply Working Group.

2.0 SPECIFICATIONS

This instruction manual contains, as its specifications, a copy of the appropriate dated draft from the U.S. CAMAC Mechanical and Power Supply Working Group. This draft is accompanied by schematics and mechanical drawings to insure proper installation, maintenance and operation of a typical CAMAC System.

2.1 OPTIONAL OUTPUTS

Special order optional outputs are provided in the Model 1510 supply. In all cases the 1510 supply is limited to a maximum output of 300 watts and provides all the standard CAMAC outputs regardless of the optional outputs required.

2.1.1 Option 1:

+10 to +18VDC @ 3A, derived and current shared with the +24V outputs.

2.1.2 Option 2:

-10 to -18VDC @ 3A, derived and current shared with the -24V output.

2.1.3 Option 4:

42 Amp. Positive 6 volt output may be supplied for 42 amps maximum with current sharing of the opposing output limited according to standard CAMAC specifications. The opposing output, however, can supply one (1) amp in all instances even when 42 amps is delivered from special regulator output.

2.1.4

Regulators for the optional 10 to 18 volts outputs will be found on the associated 24V regulator boards. The 42 Amp output utilizes a special +6 volt regulator board.

2.1.5

Optional outputs are clearly marked with warning label on the top cover of the power section.

2.2 Power De-Rating:

The maximum output power of the 1410S and 1510 supplies is 375 watts at 25 degrees centigrade ambient, derated to 300 watts at 50 degrees centigrade ambient. Excessive power draw will result in either a blown input fuse or the Hi-Temp. warning lamp will light.

3.0 OPERATION

The regulators used in the Model 1410 are the conventional series pass type utilizing integrated circuit regulators and discrete current control and over-voltage circuits. The current controls are of the foldback type, factory set a 110% min.

3.1 Blower Section:

Contains four blowers (each capable of 43CFM) to provide cooling air for both the power supply and the crate electronics and a PC board with metering elements and switches for DC metering. The blower section may be removed from the main chassis in the same manner the power supply is removed from the crate.

3.2 Main Chassis:

Right side contains the transformer, rectifiers, bulk capacitors and other components to provide unregulated DC power to the regulator side. The regulator side (left from the rear) contains 4 regulator boards, a bias supply board (control board), and a single heat sink on which are mounted all the series pass elements.

3.3 Thermal Switches:

Two thermal switches are employed, one to indicate a high temperature condition (see spec) and one to remove AC power if temperature exceeds maximum safe operating level. The location and settings may vary from unit to unit and are shown on the schematic shipped with each unit.

4.0 Servicing and Maintenance:

The 1410S and 1510 models are designed in modular form in order to facilitate repair and maintenance.

If qualified personnel are not available, remove suspected assembly from unit and return to factory for repair. Replacement assemblies can normally be obtained within three days by air freight.
