

P106 Power Supply Module.

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When fourteen Baseband Converters are used in a Data Acquisition Rack, the +5 volt current load for the analog modules (i.e. everything but the formatter) is approximately 32 amps. In the DAR, this current is normally supplied by a P103 module in the lower of the two power supply bins (the lower left power supply slot, as viewed from the front of the rack). The power unit in the P103 is a Lambda LRS-53-5, which is rated at 21.5 amps at 50 deg.C.

Interferometrics proposes to use a special P103 module for the 14-BBC racks. This will use the next larger Lambda supply in the same series, LRS-54-5, and will be given the type number P103A. This Lambda unit is rated at 40 amps at 40 deg. C, and 34 amps at 50 deg.C. The same size ("three-wide") module is used.

I discussed the problem with Ed Childers, and we both felt that we would prefer to go one size larger still for the units for Green Bank. I therefore propose that we use Lambda LRS-55-5 which is rated at 51 amps at 50 deg.C. This Lambda unit will require a "four-wide" module, for which the P105 hardware can be used with only small modifications. It should be given the type number P106. The supply should be wired like the P103, with all inputs and outputs through a 42-pin connector. If this connector is mounted in the position normally occupied by the 20-pin connector of a P105, the new module will fit directly into the same position as the P103, since there is an unused single-slot position next to the P103. I am proposing that we make just two of the P106 modules, to be used for the two 14-BBC DAR's required at Green Bank for the Navy contract.

None of the other power supplies are overloaded when 14 BBC's are used. The six BBC's in the bottom bin use a separate P101 for +15 volts, which is omitted for configurations of 8 or less BBC's.