

Power Supply Pins and Keying Scheme  
for  
VLBA Module Connectors

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The specification of pin numbers for module connectors to be used for power supply voltages should generally follow that given in VLA Technical Report No. 31, pp. 6-11 to 6-14. An exception is required in the case of power supply modules, since the total current can exceed the rating for a single pin of the signal-contact type (0.062 inch diameter). For power supply modules the power-contact pins (0.094 inch diameter) that fit in the six large-sized holes of the 42-pin mixed connector should be used. The current rating of the large pins is 23 amps. Two such pins wired in parallel should be used for the 5 volt supply, since the capacity of the P103 module exceeds 23 amps. Pin numbers in the 42-pin mixed connector are as follows:

+5 V	pin nos.	6 and 39
+15 V	pin no.	5
+28 V or other voltage	pin no.	38
negative terminal	pin nos.	40 and 7

The usage of a module to supply a positive or negative voltage is determined by grounding the appropriate terminal in the rack wiring. Use of different pins for the positive terminal will prevent damage if a power supply module of the wrong voltage type is plugged into a power-supply slot.

To prevent damage if one attempts to insert a power supply module into the slot for a non-power-supply module, the keying of the screws at the corners of the connectors must be chosen to prevent contacting of the pins. The keying scheme should also be chosen to prevent damage from insertion of Baseband Converter modules, in which the connector pins are all of the miniature-coaxicon type, into the wrong slot. To minimize the possibility of damage, the keying scheme shown below is proposed. The diagram shows the module connector as seen looking at the outside of the module back panel.

