Model PS-3D Bias Supply Operating Instructions

For QCA Series Cryogenic Amplifiers

Rev. A
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The model PS-3D bias supply is designed to work with 1, 2, and 3 stage **QuinStar Technology** and **Berkshire Technology** Cooled and Cryogenic Amplifiers.

WARNING

Please use caution when connecting the power supply's interconnect cable to the amplifier. Carefully align the Microtech connector's key (notch) with the matching key in the amplifier's socket, and use only gentle force when pushing the male and female connectors together. **Damage to these connectors caused by misalignment is not covered under the warranty.**

The Model PS-3D bias supply contains three identical circuits that modulate the gate voltage of the FET to maintain a selectable drain current between 0 and 25 mA. The drain voltage is selectable over the range of 0 to +5V.

To operate the bias supply a source of between 120V and 240 VAC (depending on model), 50-60 Hz is required.

The Stage Selector Switch is used to switch between each stage (1, 2. or 3).

The V-I switch is used to switch between reading volts (set switch to "V") or reading milliampres (set switch to "I").

1. It is recommended that the voltage and current pots be initially set to zero.
2. Set the stage selector switch to the desired stage and apply power.
    a. Set the V-I switch to "V" and slowly turn up the voltage pot until the voltage recommended on the data sheet is reached.
    b. Set the V-I Switch to "I" and slowly turn up the current pot until the recommended current is reached.
    c. Set the Stage Selector Switch to the next stage and repeat steps a,b, & c.

    NOTE: Normally the voltage will be in the 2-3V range and the current in the 5-10mA range.
3. When all stages read the appropriate voltage and current as specified on the data sheet, no further adjustment should be required.
4. It is not necessary to repeat this process each time the amplifier is used. The power may be turned on or off with the voltages and currents set to their specified values.
5. This process will need to be repeated when changing to a different amplifier.

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