LNF-PS_3 is a compact power supply designed for LNF’s cryogenic Low Noise Amplifiers. The drain voltage is regulated and adjustable within a wide range, and the gate voltage is automatically and continuously adjusted to give a set drain current.

$V_d$ and $I_d$ are clearly displayed on the LCD monitor screen for easy bias control. $V_g$ can be monitored for trouble shooting through the banana sockets on the front panel using a multimeter. $V_d$ and $I_d$ are set by trim potentiometers on the front panel. The power supply is powered by an external desktop transformer accepting 100-250 VAC, 50-60 Hz (included). Also included is a 3-DIN connector for the DC out port of the power supply.

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_d$</td>
<td>0.0 V</td>
<td>2.0 V</td>
</tr>
<tr>
<td>$I_d$</td>
<td>0.0 mA</td>
<td>50 mA</td>
</tr>
<tr>
<td>$V_g$</td>
<td>-11.8 V</td>
<td>+11.8 V</td>
</tr>
<tr>
<td>$I_g$</td>
<td>-5 mA</td>
<td>+5 mA</td>
</tr>
</tbody>
</table>
LNF-PS_3
FET constant current power supply

Dimensions in millimeters

Low Noise Factory • www.lownoisefactory.com • info@lownoisefactory.com
Biasing procedure
For safe operation of the LNA, please carefully follow the instructions below. Always honor the maximum ratings stated in the datasheet of the specific LNA.

**Power up:**
1. Switch on the power supply
2. Double check that V_d is set to the nominal voltage in the datasheet of the LNA
3. Connect the LNA’s RF input and output to your grounded test set-up
4. Connect the power supply to the LNA
5. Check that the measured I_ds is equal to the nominal value in the LNAs datasheet. Tune to the correct value if necessary.
6. Before starting a cool down, make sure that the power supply is set to the stated values at 10K. Do not cool down with the power supply set to the room temperature values.

**Power down:**
1. Disconnect the power supply from the LNA
2. Disconnect the LNA’s RF input and output
3. Switch off the power supply
Nano-D pin layout (seen from outside the LNA)

The Nano-D is our most common DC connector. The below drawing is for information only. The Nano-D connector is not included in LNF-PS_3 package.

GND, Red  Vd, Orange  Vg, Yellow