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.
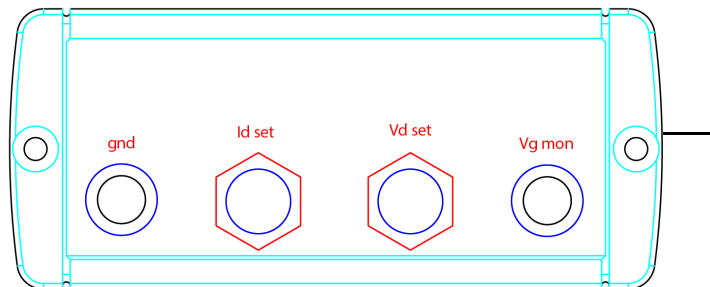
SPECIFICATIONS

Parameter	Min	Max
V_d	0.0 V	2.0 V
I_d	0.0 mA	50 mA
V_g	-11.8 V	+11.8 V
I_g	-5 mA	+5 mA

86

100

Back panel

38

gnd

Vd   Vg

DC IN   DC OUT

Front panel

gnd   Id set   Vd set   Vg mon
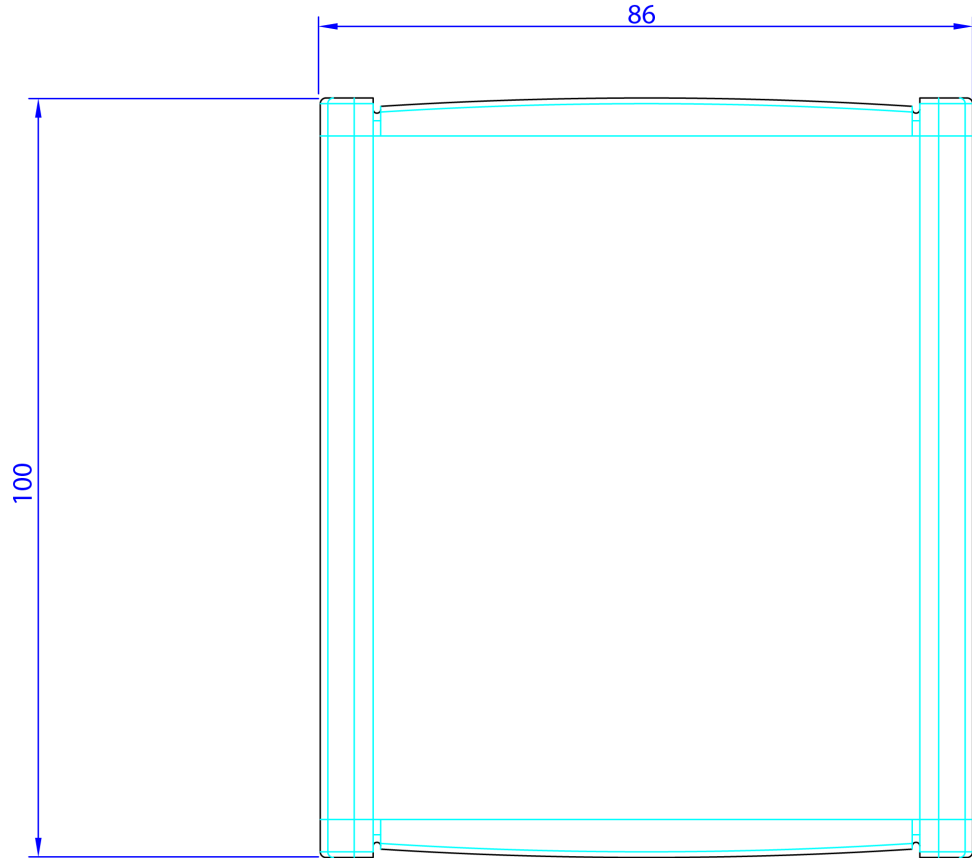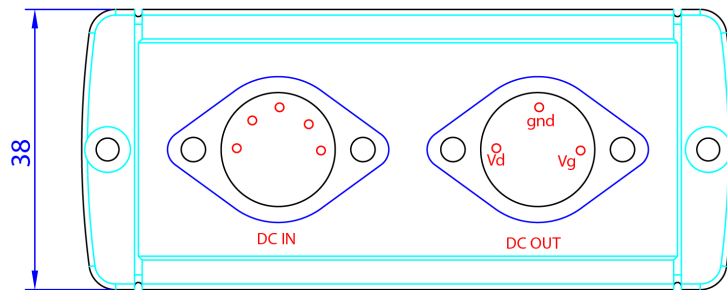
Dimensions in millimeters

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