

DNM-121

Digital Nanoammeter



- Measures current down to 100pA
- All solid state and IC design
- Accepts either polarity of input current
- Build-in computer interface

Introduction

Digital Nanoammeter, DNM-121, a rugged and low cost instrument, is a product of extensive R&D using high input impedance integrated circuits. It has 4 decade ranges with 100% over-ranging. The unit is suitable for current measurement in the range of 100pA to 200pA. For the ease, readings are directly obtained on a 3 1/2 digit DPM. The instrument is capable of accepting either polarity of the input current.

The very low leakage current of the input stage combined with the high linearity fast response due to high negative feedback enables accurate and easily reproducible measurements. The instrument uses a FET input operational amplifier that offers the very low input bias current, low offset voltage, low drift and noise. These characteristics have been fully utilized in the present Nanoammeter. This operational amplifier is used in low level current to voltage configuration.

Applications

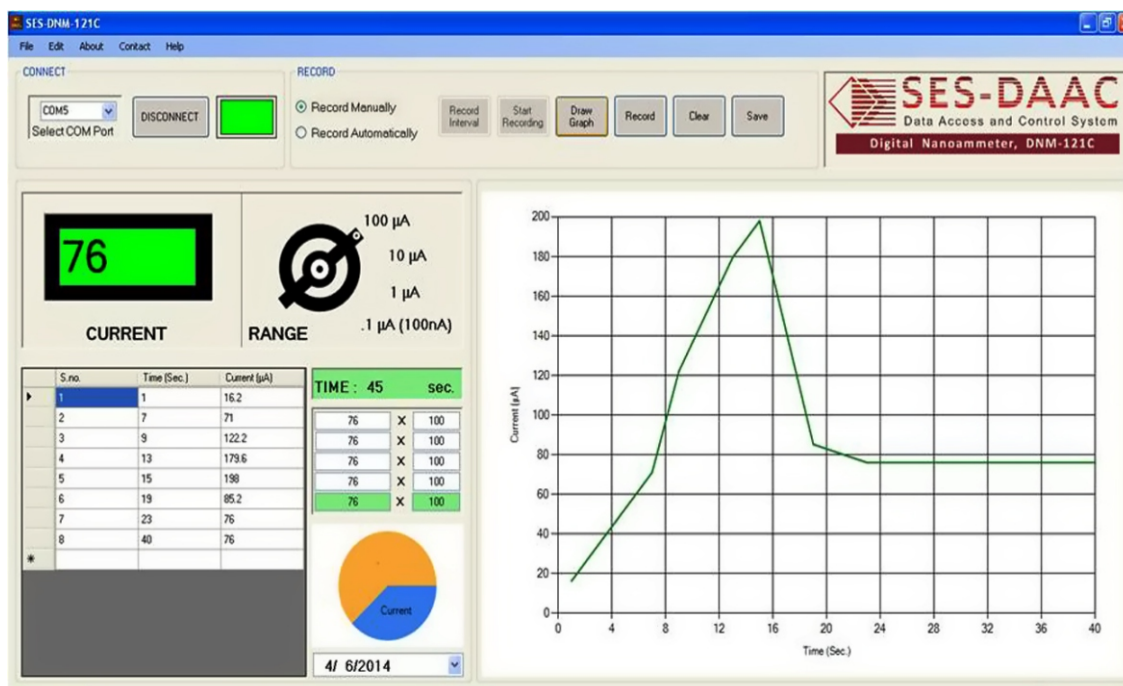
- To measure current from photomultiplier tubes, photometer etc.
- Leakage currents in solid state devices. FET gate and tube grid voltages without loading errors.
- Current through very high resistance in conjunction with a power supply.
- Potentials across semiconductors, piezoelectric systems & pH electrodes.

Specifications

Range	: 100nA, 1µA, 10µA, 100µA with 100% over-ranging
Accuracy	: 0.2% for all ranges
Resolution	: 0.1nA
Input Impedance	: 25Ω, 2.5Ω, 0.25Ω, 0.025Ω
Display	: 3 1/2 digit 7 segment LED (12.5mm height) with auto polarity and decimal indication
Input	: Through BNC connector
Interfacing	: USB (In DNM-121-C2 only)
Software	: DACC and CMM, both Window compatible (In DNM-121-C2 only)
Power Supply	: 220V ±10%, 50Hz
Weight	: 2.5Kg

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Computer Interface, SES-DAAC (In DNM-121-C2 only)

The unit can be connected directly to a PC through an USB. SES-Data Access And Control is a built-in interface which gives user an option to store a value as displayed on the meter and tabulate it by the click of a button on the screen. Alternatively the data may be automatically entered into a table at user selectable interval. An 'END' button on the screen terminates the automatic tabulation. The data stored in the table may then be displayed as a graph on the screen and may also be stored in an excel file for further processing. The software supplied with the unit is menu driven and is simple to operate.

SES-CAMM Compatible (In DNM-121-C2 only)

This unit can also be connected to a PC through an interface module SES-CAMM. SES-CAMM is a computer aided measurement module for connecting multiple subunits of experiments such as Two Probe Setup to same interface on a computer. This feature is particularly useful in making this model compatible with computerized versions of complete experiments from our company.

