



Model 100 Series Picoammeter

QUICK START GUIDE

Model 100 Series Picoammeters

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For Model 100 Series Instruments

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SAFETY

CAUTION

A CAUTION notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in damage to the product or loss of important data. Do not proceed beyond a CAUTION notice until the indicated conditions are fully understood and met.

WARNING

A WARNING notice denotes a hazard. It calls attention to an operating procedure, practice, or the like that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a WARNING notice until the indicated conditions are fully understood and met.

SAFETY INFORMATION

This instrument is safety-certified in compliance with IEC/EN 61010-1:2010, CAT II 300 V Overvoltage Protection, Pollution Degree II. Use with standard or compatible test probes.

Safety Symbols



Caution, risk of danger (refer to the instrument manual for specific Warning or Caution information)



Caution, risk of electric shock



Caution, surface may be hot. Avoid personal contact to prevent burns



The symbol indicates a connection terminal to the equipment frame

Hg

Indicates that mercury is present in the display lamp

**CAT II
300 V**

Category II 300 V overvoltage protection



Earth (ground) terminal



Equipment protected throughout by double or reinforced insulation

1. Introduction

Congratulations on your purchase of the Model 100 Series Picoammeter. The Model 100 instruments are fast and accurate instruments suitable for bench top, laboratory, and system applications.

Picoammeter Instruments are used to measure extremely small currents.

This quick-start guide will get you set up and conducting measurements quickly.

2. Unpacking And Inspection

Carefully remove the instrument from its shipping container and inspect the contents for damage. If the instrument appears damaged or any items are missing, immediately contact both the shipper and AMETRIX.

The Model 100 Series is easy to set-up and ships with everything you need to setup the instrument. When unpacking your instrument, use the packing slip to verify that everything is present.

The box contains:

- a. One (1) Model 100 Series instrument
- b. One power cable—IEC 320-C13
- c. Power Supply
- d. AMETRIX System Software (CD or DVD), Soft Front Panel (SFP), and drivers
 1. C# software sample code
 2. LabVIEW® driver and sample Vis
 3. Quick Start Guide
 4. Manual
 5. Warranty/registration card
- e. Any optional cables included in your order

Your instrument was should arrive in perfect condition however, if there is any evidence of damage, save the shipping container and packing material for the carrier's inspection.



When operating with high voltages (> 60 V) all safety warnings in the manual must be observed.

3. Preparing the Picoammeter for Use

Install Software and Drivers

NOTE: Install the software before attaching your Model 100 Series instrument.

Installing Soft Front Panel (SFP). Your Model 100 Series Picoammeter ships with the software installation disk but the software updates can be pulled from the website. The software is Windows-based and will run in Windows XP, Windows 7, and Windows 8.

Insert the CD in the appropriate drive and navigate to the appropriate directory for your computer; AmetrixM100Setup32 for 32 bit processor computers, or AmetrixM100Setup64 for 64 bit processor computers. Then double click setup.exe.

4. Setting Up Your Model 100 Series Instrument

When preparing your instrument for use, the unit should be powered up for ten minutes prior to use. Setting up your instrument is simple and straight forward. Essentially there are five steps:

a. Connect the instrument to your computer

Connect the instrument to your computer using the included cable, which connects the instrument to the USB port on your computer.


b. Apply power to your Model 100 Series

Connect the included tabletop power supply's XLR connector to the rear of the Model 100 Series; alternatively, an external user supplied +6 V to +36 V may be wired to an XLR connector to power the unit (please refer to the operator's manual for more information).



If you are supplying your own power, and if it derived from Mains power, your power supply MUST have either double or reinforced insulation.

c. Launch Soft Front Panel (SFP)

Launch SFP by clicking on the AMETRIX SFP icon  just as you would any standard Windows-based software.

d. Connect the signal source you want to measure

Connection to the Model 100 Series is via a coaxial cable with a BNC on at least one end. The other end of the cable is placed in series with the circuit that is to be measured.

A safety BNC cable shall be used for input voltages greater than 60 VDC (see accessory list in the data sheet).

e. Configure the software

To establish communications between the computer, the instrument, and the device, select Connect. An error will occur if the instrument does not see a device.

Across the bottom of the interface are six tabs that provide access to the software's advanced functions.

- Measurements
- Bias Voltage (Model 101 and 102 only)
- Data Log
- Digital I/O (Model 101 and 102 only)
- Sync
- Calibration

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