SRM232 SHEET RESISTANCE METER WITH FOUR POINT PROBE HEAD

SRM232 is a low-cost hand-held sheet resistance meter with four point probe for use in measuring the sheet resistance of applied coatings such as conductive paints, EMI coatings, ITO on glass, and many other types of materials. The unit operates on one 9 volt battery. The data from up to 127 measurements can be stored in the unit and then uploaded to a PC via the included RS-232 cable.

The SRM232 is available in four measurement ranges as follows:

SRM232-10
- Range: 0.00 to 9.999 ohms/square
- Resolution: 0.004 ohms/sq
- Accuracy: 0.01 ohms/sq @ 1.00 ohm/sq

SRM232-100
- Range: 0.00 to 95.00 ohms/square
- Resolution: 0.04 ohms/sq
- Accuracy: 0.07 ohms/sq @ 10 ohms/sq

SRM232-1000
- Range: 0 to 1000 ohms/square
- Resolution: 0.4 ohms/sq
- Accuracy: 0.7 ohms/sq @ 100 ohm/sq

SRM232-2000
- Range: 0 to 2000 ohms/square
- Resolution: 0.8 ohms/sq
- Accuracy: 1.4 ohms/sq @ 1000 ohm/sq

SRM-CAL Calibration Fixture

The SRM-CAL is a test fixture that contains three sets of contact points for use in verifying the accuracy of the SRM-232 against an external standard. One set of pads is connected to a dead short; one set of pads is connected to a precision resistor with a value in the middle of the SRM232's measurement range; the third set of pads is connected to a precision resistor with a value in the upper end of the SRM232's measurement range. The two precision resistors are NIST traceable secondary standards. If an inaccuracy in the unit is detected when checking it against the calibration fixture, the SRM can be factory re-adjusted.
The calibration mode as explained in the SRM232 manual is for self calibration against precision resistors that are internal to the SRM232. The SRM-CAL is used to verify the accuracy of the instrument against an external standard. The SRM does not provide the capability for the end user to adjust the SRM against the external SRM-CAL - this must be performed at the factor using special equipment.

SRM Probe Head

The SRM Probe Head is a plastic bodied four point probe head which is applied by hand. The connection to the probe head from the SRM232 electronics is via a female RJ45 connector which is the same type of connector used for Ethernet connections. The SRM232 four point probe systems include one SRM Probe Head and one of the coiled cables shown below.

Probe Tips Specification Choices:

Tip Spacing: 40, 50, or 62.5 mils (1mm, 1.27mm, 1.6mm)
Spring Loads: 45, 85, or 180 grams per tip
Tip Material: tungsten carbide or 50% osmium alloy
Tip Radius: 1.6, 5, or 10 mils (40µm, 125µm, 254µm)

The probe is also available with the “flush mount” housing in which the tips are recessed deeper into the outer housing so that the tip retraction is limited, resulting in an even lower spring pressure than the 45 gram.