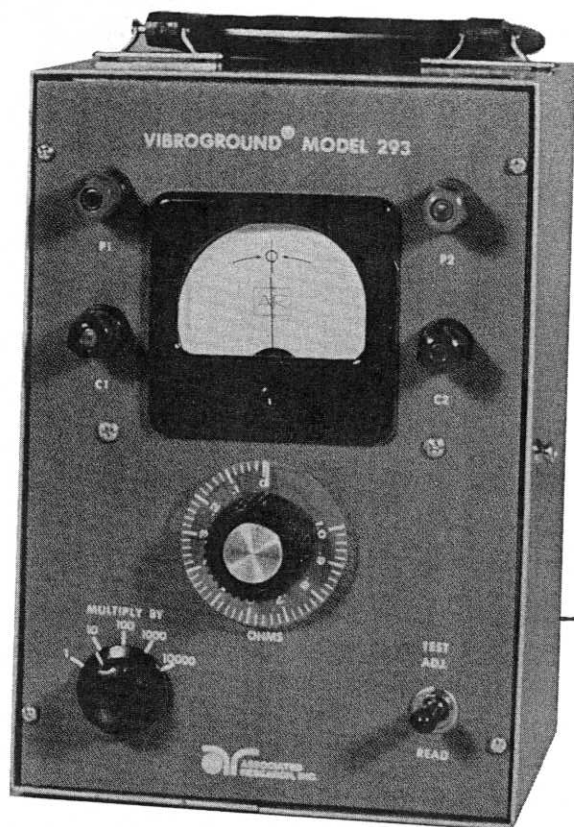


VIBROGROUND® RESISTIVITY INSTRUMENTS



Vibroground Model 293A

0-1/10/100/1000/10,000 ohms

The extended range of this model (0-10,000 ohms) allows a wider range of direct resistivity measurements with a soil box or the single probe. Also preferable when checking pipe-to-soil coating resistance, or resistance of insulated couplings and flanges.

Corrosion engineers' favorite Measures:

- Soil resistivity
- Anode resistance
- Resistivity of solids and liquids
- Polarization effects
- Circuit resistance

A complete, fully portable instrument

Self-powered by 2 standard 6 volt dry cells. Easy to replace after long use.

Low range sensitivity

Accurate within 2% of full scale reading on any range. VIBROGROUND resistance readings are not affected by lengths of leads nor stray AC or DC earth currents.

Simple lever switch operation. Has range selector switch and single calibrated dial.

Rugged steel case for protection in field. Finished in gray with blue hammertone aluminum panel.

VIBROGROUND Model 293A

This instrument was designed after careful consultation with recognized leaders in the field to fit the special needs of corrosion engineers. Emphasis has been placed on lightweight, portability, and proper resistance ranges for field work.

In addition to measuring soil resistivity, the instrument measures the true resistance to earth of man made grounds, irrespective of the earth resistance and condition. Their accuracy is not affected by the resistance of auxiliary prods or leads or by stray AC or DC currents in the earth. Their accuracy is not dependent on the meter, but on a precision calibrated potentiometer. Polarization effects are reduced to a minimum.

Ranges are selected by a separate switch at lower left of the panel. VIBROGROUND'S special design permits reading all ranges on the single scale of the potentiometer. All resistance values are determined by simple decimal multiplication. Model 293A gives accurate readings in soils varying in resistivities from zero to more than 20,000,000 ohms per cubic centimeter. These ranges also cover resistance measurements of single or multiple anodes installed in these soils.

Simplicity of operation and ease of use are outstanding features of VIBROGROUNDS. No previous instruction or training period is required. Clear, concise instructions are given on the cover to the instrument and the accompanying Operation Manual.

Other possible measurements include:

Polarization effects: Use three electrode method, described on page 3, before and after cathodic protection has been applied. Resistance measurement can be made with the VIBROGROUND while cathodic protection is being applied.

Current density: Use four electrode method to measure resistance between two potential electrodes at right angles to structure, then measure potential difference between same two electrodes with potentiometer voltmeter. Calculate current from Ohms Law.

Specifications:



Vibroground Model 293A: Ranges are 0-1, 0-10, 0-100, 0-1000, 0-10,000 ohms. Shipped complete and ready to operate with two standard 6 volt dry cells. Steel case with removable cover. Measures $9'' \times 6\frac{1}{4}'' \times 9\frac{1}{4}''$ ($23 \times 16 \times 23.5$ cm). Weight: 17 pounds (7.7 kg).

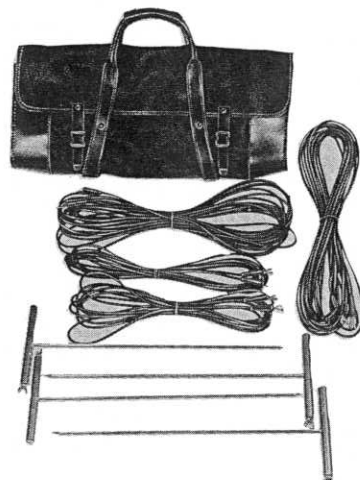
Now with solid state electronic vibrator!

Accessories:

No. 10817 Adapter to connect 4 ft. (1.2 m) single probe soil resistivity electrode to Models 263A, 293A.

No. 7294 Four-foot (1.2 m) Soil Resistivity Electrode.

Test Kit—Model 7105—provides a convenient set of leads and prods for use with VIBROGROUND Model 293A for resistivity testing to approximately 30 ft. (9.1 m) depth. Kit contains: four 18" (46 cm) T-shaped ground prods, two test leads 20 ft. (6.1 m) long and two test leads 50 ft. (15.2 m) long with oil and abrasion resistant sheathing, stranded copper conductor. All neatly packed in simulated leather carrying case with handle.



Carrying Case—Part 18533—combines the features of an instrument carrying case and Model 7105 Test Kit. It consists of a partitioned leatherette case with a compartment for either VIBROGROUND model and includes: four 18" (45.7 cm) T-shaped ground prods, two test leads 20 ft. (6.1 m) long and two test leads 50 ft. (15.2 m) long.