

LandMapper® ERM-02

LandMapper ERM-02 is a newest device in the product line of Landviser, LLC. This portable device can measure three important electrical properties of solid, semisolid, and liquid media: electrical resistivity (ER), conductivity (EC), and potential (EP). Using the most accurate four-electrode principle LandMapper ERM-02 measures ER or EC to help you to delineate areas with contrasting soil properties within the fields quickly, non-destructively, and cost-efficiently. Using the device prior to soil sampling you can significantly reduce the amount of samples required and precisely design a sampling plan based on the site spatial variability.

LandMapper ERM-02 measures electrical resistivity or conductivity of soils and related media for express non-destructive mapping and monitoring of agricultural fields as well as construction and remediation sites. In a typical setting, a four-electrode probe is placed on the soil surface and an electrical resistivity or conductivity value is read from the digital display. The device measures electrical resistivity or conductivity in a surface soil layer of the depth from 2 cm down to 10 m, which is set by varying the size of a four-electrode probe.



LandMapper ERM-02 is the most versatile device in LandMapper series and allows you not only measure ER and EC using artificially applied electrical current and four-electrode probes, but also study natural electrical fields in soils and plants with non-polarizing electrodes. Electrical balance between soil and plants is important for plant health and electrical potential gradient governs water and nutrient uptake by plants. Monitoring of electrical potentials in plants and soils is a cutting-edge research topic in the leading scientific centers around the world.

Advanced scientific research supports versatile applicability and usefulness of our equipment. Our team was working on a theory of the electrical fields in soils, applications of electrical resistivity measurements in soil science, and electrical geophysical data interpretation for 20 years; combined work of three Ph.D. scientists in the area is about 38 years. Five dissertations and 6 books were published on the topic in Russia and USA.

