



PRODUCTS

Conductivity Meters

EM31-MK2

EM34-3

EM38

Metal Detectors

Time Domain Systems

VLF Systems

Borehole Probes

Data Acquisition

Software

Third Party Software

Downloads

[Catalogue](#)

EM31-MK2 | EM31-SH

EM31-MK2

The EM31-MK2 maps geologic variations, groundwater contaminants, or any subsurface feature associated with changes in ground conductivity. Using a patented electromagnetic inductive technique that allows measurements without electrodes or ground contact. With this inductive method, surveys can be carried out under most geologic conditions including those of high surface resistivity such as sand, gravel, and asphalt.

Ground conductivity (quad-phase) and magnetic susceptibility (in-phase) measurements are read directly from an integrated DL600 data logger (which can be easily removed from the console for data transfer). Real Time (RT) graphical presentation of the data during collection is possible by connecting a computer directly to the RS232 output port on the front panel with an optional RS232 interconnect cable.

The effective depth of exploration is about six metres, making it ideal for geotechnical and environmental site characterization. Important advantages of the EM31-MK2 over conventional resistivity methods are the speed with which surveys can be performed, the precision with which small changes in conductivity can be measured and the continuous readout and data collection while traversing the survey area. Additionally, the in-phase component is particularly useful for the detection of buried metallic structure and waste material.

EM31-SH

The EM31-SH is a "short" version of the EM31-MK2 providing an effective depth of exploration of about four metres. With a smaller coil separation (2 m) and lighter weight, the EM31-SH offers improvements in sensitivity to smaller near-surface targets, lateral resolution and portability, while maintaining the high levels of accuracy and stability provided by the standard EM31-MK2. A "trailer-mount" (see photo) is available for either instrument, offering greater convenience in some field operations.



Specifications

MEASURED QUANTITIES

- 1: Apparent conductivity in millisiemens per metre (mS/m)
- 2: In-phase ratio of the secondary to primary magnetic field in parts per thousand (ppt)

INTERCOIL SPACING

3.66 metres

OPERATING FREQUENCY

9.8 kHz

POWER SUPPLY

8 disposable alkaline "C" cells (approx. 20 h continuous)

MEASURING RANGES

Conduct.: 10,100,1K mS/m;
In-phase: +/- 20 ppt

MEASUREMENT RESOLUTION

+/- 0.1% of full scale

MEASUREMENT ACCURACY

+/- 5% at 20 mS/m

NOISE LEVELS

Conductivity: 0.1 mS/m
In-phase: 0.03 ppt

DATA STORAGE

10,000 records (2 components);
16,500 records (1 component); ext.
memory available

DIMENSIONS

Boom: 4m ext.; 1.4m stored
Case: 145x38x23 cm

WEIGHTS

Instrument: 12.4 kg;
Shipping: 28 kg



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