Terrameter VES

1D Resistivity and IP

EVEN BASIC METHODS DESERVE MORE THAN BASIC INSTRUMENTS

Technical Specification

Inspired by the ABEM Terrameter LS 2, the **ABEM Terrameter VES** brings new levels of performance and functionality to your VES surveys for resistivity and IP.

General

30% better resolution*

50% higher maximum current*

More memory*

Remote control and diagnostics

Built-in GNSS (GPS & GLONASS)

Real-time sounding curve

Better connectivity with Wi-Fi, Ethernet and USB*

User-friendly interface with ABEM Active Guidance

*Compared to the ABEM Terrameter SAS 1000

Upgrades

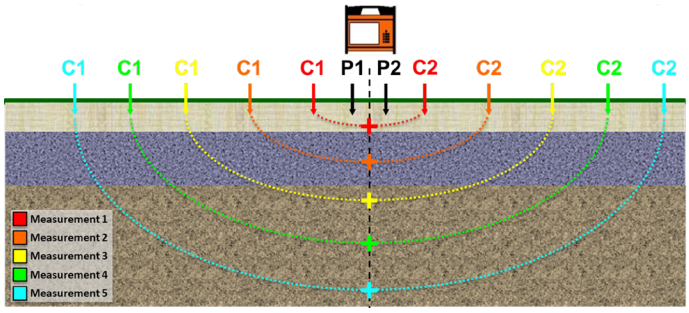
The Terrameter VES can be upgraded to the VES MAX specification and both instruments can be upgraded to full imaging systems - simply choose the Terrameter LS 2 model that suits your needs.

Accessories

A range of quality accessories are available for the VES instruments including VES cable sets, non-polarising electrodes, flight cases, power adapters and batteries, plus the plug-and-play Terrameter Log borehole resistivity logging tool.

The VES Survey Method

VES (vertical electrical sounding) is a basic method which uses four electrodes, two to inject current (C1 & C2) and two to measure voltage (P1 & P2). When the electrodes are moved apart, the electrical field extends deeper into the ground, allowing deeper measurements. Raw data are processed with inversion software to provide a model of resistivity versus depth beneath the centre of the electrode spread.



VES is an excellent, easy-to-use method for identifying aquifers, saline intrusion, geological layering, large mineral bodies, and for predicting the earthing properties of the ground around electrical installations, especially DC (direct current) sites where a deeper assessment is often required.

TRANSMITTER

	Terrameter VES	Terrameter VES MAX
Output power (W)	100	250
Output voltage (V)	400	600
Output current (mA)	1500	2500
Constant current	Yes	
Precision (%)	0.1	
Accuracy (%)	0.2	

RECEIVER

Measure modes	Resistivity, IP (50% duty cycle), SP	
Induced polarization 100 % duty cycle mode	No	Yes
Full waveform	No	Yes
Number of measuring channels	1	2
All channels galvanically isolated	n/a	Yes
Voltage ranges	1(±15V)	3 (±2.5V, ±15V, ±600V)
Input impedance (MOhm)	30	Up to 200
Precision (%)	0.1	
Accuracy (%)	0.2	
A/D converter (bits)	24	
Theoretical resolution (nV)	22.5	3
On-screen sounding curve	Yes	Yes
Multi-electrode switching	No	Yes – up to 16 electrodes

GENERAL

Memory	32GB	
Built-in GNSS	GPS & GLONASS	
Connectivity	USB, Wi-Fi, Ethernet	
Display	8.4” full colour display 39x32x21cm	
Internal battery	Option	Yes
Office power supply	Option	Yes
User remote control	Yes	
Remote diagnostic support	Yes	
Case	Wooden ABEM crate	Peli-style flight case
Environmental	IEC IP66 -20 to +70°C	

DESIGN & DIMENSIONS

Case design	Aluminium alloy 39x32x21cm	
Weight	9.2 kg (without internal battery)	10.6 kg (with internal battery)

ABEM Terrameter VES MAX

The ABEM Terrameter VES MAX is a ‘bridging’ instrument for resistivity and IP, aimed at those with serious aspirations to start doing ERT in the future, and those with the budget for a fully-specified VES instrument, capable of advanced functionality. It should be of particular interest to those with requirements for IP or deeper resistivity surveys as it provides more power and improved sensitivity over the regular ABEM Terrameter VES.

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