



ABEM

by Guideline Geo



Technical Specification

ABEM Terrameter LS 2



The ABEM Terrameter LS 2 is a world leading resistivity/IP instrument which can be used for a wide range of applications. With its hardware licensing system it is available in multiple configurations to best match your requirements, with the ability to upgrade the specifications remotely should your circumstances change in the future. Ease-of-use is at the heart of ABEM instrument design, and the easy-to-navigate menus, on the large colour display, are supported by Active Guidance, which provides specific assistance on every screen, menu item, and command at the press of a button.

General

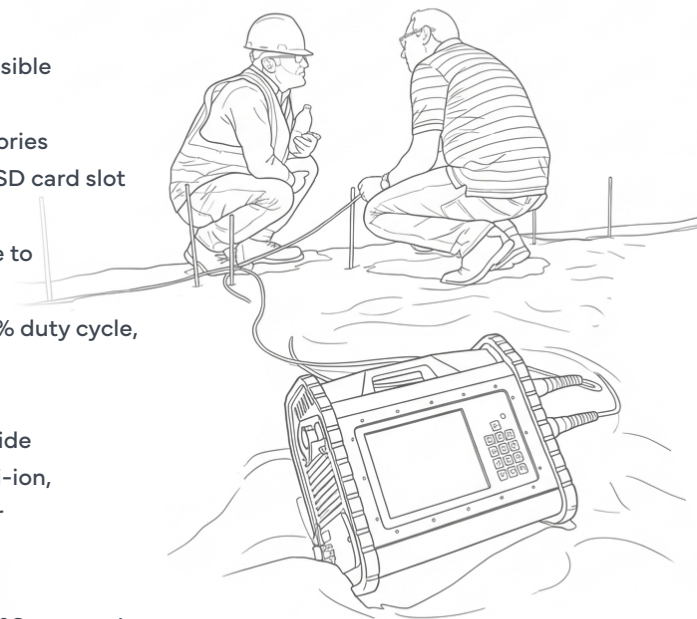
Casing	Rugged aluminum case meets IEC IP66
Computer	Embedded ARM 9, 400 MHz
GPS	Built-in GPS with support for GLONASS
Display	8.4" Active TFT LCD, full colour, daylight visible
Languages	English, French, Spanish, Swedish
I/O ports	2x KPT 32 pin for imaging, AUX for accessories Interconnect, USB A, RJ45 for LAN, microSD card slot
WLAN	IEEE 802.11 b/g/n, built-in antenna
Remote control	Operate remotely with autonomous mode to measure on a predefined schedule
Measure modes	Resistivity, SP, Resistivity and IP using 50 % duty cycle, Resistivity and IP using 100 % duty cycle ¹
Service point	Accessible through Internet
Memory capacity	16 GB, microSD card accessible from outside
Power	2x hot swappable, 10.8 V, 6.8 Ah internal Li-ion, built-in charger; 12-18 VDC external power
Dimensions	39 x 21 x 32 cm (WxLxH)
Weight	13.2 kg (12.2 kg without internal battery)
Ambient temp. range	-20°C to +70°C operating ^{2 3} -30°C to +80°C storage ⁴

Note 1: Available on all "Advanced" models

Note 2: Measuring speed may be reduced in high ambient temperature combined with high output power

Note 3: The performance of the LCD is not guaranteed below 0°C

Note 4: Non-condensing



Multi-Electrode Survey Systems for 2D & 3D

Number of electrodes	Up to 81, using internal electrode selector Up to 16,384, using external electrode selectors
Switching matrix	Internal 10x64
Roll-along	Full coverage, both 2D and 3D
Pre-installed array types	Multiple Gradient, Dipole-Dipole, Wenner, Schlumberger, Pole-Dipole and Pole-Pole
Remote electrodes	2 remote electrodes in addition to in-line electrodes
Diagnostics	Electrode contact resistance, isolation and continuity tests, self test of transmitter and receiver circuits, relay test

Receiver

Number of channels	Up to 12 (+ 2 for transmitter monitoring)
Isolation	All channels are galvanically separated
Input voltage range	Up to ± 600 V
Range	Depending on model: ± 2.5 V, ± 15 V, ± 600 V
Input impedance (Z)	200 MOhm (± 2.5 V range), 30 MOhm (± 15 V range), 20 MOhm (± 600 V range)
Precision	0.1 %
Accuracy	0.2 %
Resolution	Up to 3 nV at 1 sec integration (theoretical)
Linearity	0.005 %
Flat frequency response	Better than 1 % up to 300 Hz
IP windows	Up to 20, user defined
Full waveform recording	Tx output voltage and current plus Rx channels, at up to 9000 Hz ¹

Transmitter

Maximum output power	Up to 250 W
Current transmission	Constant current transmitter
Maximum output current	Up to 2500 mA
Maximum output voltage	Up to ± 600 V, 1200 V peak to peak
Current accuracy	0.2 %
Current precision	0.1 %
Instant polarity changer	Yes
Self diagnostics	Monitoring of temperature and power dissipation
Safety	Easily accessible safety switch
Full waveform recording	Depending on model, built-in monitoring of current and voltage output



Accessories catalogue

Scan the QR-code to explore the most commonly purchased accessories and extras.



Specifications per model

Remote upgrades are available between any of the models; just upload a new license file via USB or connect from the instrument to the Guideline Geo license server.

Model Configuration	Basic 2/48	Standard 2/48	Standard 2/81	Advanced 4/48	Advanced 10/48	Advanced 4/81	Advanced 8/81	Advanced 12/81
Number of channels	2	2	2	4	10	4	8	12
Max. no. electrodes	48	48	81	48	48	81	81	81
Input voltage range	± 15 V	± 15 V	± 15 V	± 600 V	± 600 V	± 600 V	± 600 V	± 600 V
Input Z (± 2.5 V)	-	-	-	200 M Ω	200 M Ω	200 M Ω	200 M Ω	200 M Ω
Input Z (± 15 V)	30 M Ω	30 M Ω	30 M Ω	30 M Ω	30 M Ω	30 M Ω	30 M Ω	30 M Ω
Input Z (± 600 V)	-	-	-	20 M Ω	20 M Ω	20 M Ω	20 M Ω	20 M Ω
Theor. resolution	22.5 nV	22.5 nV	22.5 nV	3 nV	3 nV	3 nV	3 nV	3 nV
Max. output power	100 W	200 W	200 W	250 W	250 W	250 W	250 W	250 W
Max. output current	1500 mA	2000 mA	2000 mA	2500 mA	2500 mA	2500 mA	2500 mA	2500 mA
Max. output voltage	400 V	500 V	500 V	600 V	600 V	600 V	600 V	600 V
Full waveform rec.	No	No	No	Yes	Yes	Yes	Yes	Yes
IP	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
IP - 100% Duty cycle	No	No	No	Yes	Yes	Yes	Yes	Yes

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