

ABEM Terrameter LS

RESISTIVITY AND IP IMAGING

Streamlined for productivity

ABEM Terrameter LS is a world leading resistivity/IP instrument which can be used for a wide range of applications. Using a software licensing system, it is available in a larger number of configurations to perfectly match your requirements.

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 |
| I/O ports | 2x KPT 32 pin for imaging AUX, Interconnect, USB A, RJ45 for LAN |
| WLAN | IEEE 802.11 b/g/n, built-in antenna |
| 3G/GSM¹ | 3G (UMTS/HSPA+) and GSM (GPRS/Edge), built in antenna Five bands 3G: 850/800, 900, 1900 and 2100 MHz Quad-band GSM: 850/900/1800/1900 MHz |
| 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 | 12 V, 8 Ah internal battery, built-in charger 12-18 VDC external power |
| Dimensions | (WxLxH) 39x21x32 cm |
| Weight | 13.9 kg, 12.2 kg without internal battery |
| Ambient temperature range | - 20° C to + 70° C operating ^{2, 3} - 30° C to + 80° C storage ⁴ |

Note 1: Feature will be activated in software during 2017

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 16384, using external electrode selectors |
| Switching matrix | Internal 10x64, divided into four blocks for effective use of all receiver channels available |
| 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 inline electrodes |
| Electrode test | Estimates contact resistance on all electrodes currently in use |



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 | 200 M Ω (± 2.5 V range), 30 M Ω (± 15 V range), 20 M Ω (± 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 |
| Full waveform recording | Depending on model Built-in monitoring of all input channels |

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 |



Specifications per model

| 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 |
| Number of 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 impedance (± 2.5 V) | - | - | - | 200 M Ω | 200 M Ω | 200 M Ω | 200 M Ω | 200 M Ω |
| Input impedance (± 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 impedance (± 600 V) | - | - | - | 20 M Ω | 20 M Ω | 20 M Ω | 20 M Ω | 20 M Ω |
| Theoretical 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 | 1000 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 recording | No | No | No | Yes | Yes | Yes | Yes | Yes |
| IP using 100 % Duty Cycle | No | No | No | Yes | Yes | Yes | Yes | Yes |

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