SIGNAL GEOFÍSICA LTDA
CNPJ: 36445743/0001-12
Telefone: (41) 99560-2470
e-mail: signal@signalgeofisica.com
Av. São José, 618 - Cristo Rei, Curitiba - PR, 80050-350

Multi-electrode electrical resistivity & induced polarization imaging instrument SibER

Multi-electrode geoelectrical solution SibER is meant to combine the functions of transmitter, multi-channel receiver and switchbox in single protective case. The device is designed for electrical resistivity tomography (ERT) and vertical electrical sounding (VES) in IP or resistivity method. SibER can also be used for electrical logging. Our company manufactures reinforced sealed cable systems for electrical surveys with any electrode spacing that is perfectly compatible with SibER.

SibER has the following features that improve data quality and performance:

- display of generated and measured signals in real time;
- automatic output of the obtained data quality evaluation based on the analysis of the input signals;

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- easily editable composite measurement templates for data collection in a single work cycle and possibility of subsequent separate processing;
- selective or continuous quality check of electrodes grounding;
- possibility of disconnecting unused electrodes;
- adjustable power comsumption;
- automatic detection of power failures, open circuits and short-circuits.

Three versions of SibER vary not only in the number of electrodes (from 32 to 64), but also in the output power of transmitters: 120 or 220 W. SibER 64K15 has also the capability to connect an external 1000 W transmitter.

The instrument can be controlled by PC, tablet or smartphone via Wi-Fi connection or Ethernet. The Xeris measurement control software is designed for Windows and Android OS. In addition to measurement triggering and control functions, the program allows data filtering and storage of user-created measurement protocols, including a combination of several arrays - Schlumberger, dipole-dipole, three-electrode (forward and reverse), two-electrode and others. Voltage, pulse duration, number of accumulations and other settings can be varied during measurements. Interrupted measurements can be resumed. It is also possible to specify the exact coordinates of remote electrodes, which are to be considered at data processing stage.

SibER 48K12 and 64K15 allows continuous profiling with the transfer of the first segment of the electrode cable of the previous arrangement to the end of the next one.

Output data formats are compatible with popular postprocessing programs, such as: ZondRes2D or ZondRes3D.

Application areas:

- Engineering surveys
- Environmental surveys
- Studies and monitoring of geohazards
- Borehole electrical prospecting

Delivery set:

- Standard Kit:
- SibER imaging instrument

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- Charger for internal battery
- Cable for connecting an external 12 V power supply
- External control panel based on Android OS
- Wooden transportation case

Professional set:

- SibER imaging instrument
- Charger for internal battery
- Cable for external 12 V power supply
- External control panel based on Android OS
- Wooden transportation case
- Cable array (5 m distance between electrodes / 2 end connectors) (for SibeR 48K12 and SibeR 64K15 – 2 pc.)
- Titanium electrode-pins 0.3 m (35 / 50 / 66 pcs.)
- Cable-electrode connectors (35 / 50 / 66 pcs)
- Quiver bags for electrodes (2 pcs)
- Cable reel RT-1S
- Logging cable (1 km)
- Transportation bag (2 pc.)

Specification:

General	SibER 32K4	SibER 48K12	SibER 64K15
Number of switching electrodes	32 + 2 remote ones	2×24 + 2 remote ones	2×32 + 2 remote ones
External power	12 V		
Backup power supply	12 V, 2.3 A·h		
Interface	Wi-Fi, Ethernet		
IP	IP67 (transportation), IP54 (usage)		
Operating temperature	−20 ÷ +50 °C		
Overall dimensions	336 × 300 × 148 mm	464 × 366 × 176 mm	502 × 415 × 246 mm
Weight of set	7 kg	12 kg	17 kg

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Backup power supply	12 V, 2.3 A·h		
Interface	Wi-Fi, Ethernet		
IP	IP67 (transportation), IP54 (usage)		
Operating temperature	−20 ÷ +50 °C		
Overall dimensions	336 × 300 × 148 mm	464 × 366 × 176 mm	502 × 415 × 246 mm
Weight of set	7 kg	12 kg	17 kg
Multichannel receiver			
Number of channels	4	12	15
Input impedance	10 MOhm		
Counts during impulse (pause)	1...500		
Sampling frequency	50, 60 Hz		
ADC	24 bit		
Input voltage	−20 ÷ 20 V		
Resolution	1 μV		
Noise elimination for commercial frequencies	≥ 90 dB		
Over voltage protection	up to 1000 V		
Transmitter			
Output voltage	1 ... 250 V	1 ... 500 V	1 ... 500 V
Output current	1.2 A	2 A	2 A
Output power	120 W	220 W	220 W
Pulse duration	up to 10 s		
Pause time between output pulses	≥ 20 ms		
Short-circuit protection	yes		
Power supply module			
Auto polarity switching	yes		
Voltage range	10.5 ÷ 15 V		
No power indication	sound, LED		

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