

SCINTREX
Earth Science Instrumentation



SARIS

Scintrex Automated Resistivity Imaging System

Saris is the latest innovation in resistivity technology. A truly unparalleled approach to providing the user with a cost effective, easy to use and infinitely useful instrument designed with the user in mind.

Whether your application is groundwater, environmental, archaeology or resource exploration, SARIS gives you an intelligent, accurate and reliable system for electrical soundings and profiling.

Resistivity (geoelectrical) surveying is one of the most useful geophysical techniques available today. Having been successfully used for many years as a mineral exploration and oil & gas exploration tool, resistivity is now routinely used for a wide variety of applications. SARIS gives the explorationist an instrument which maximizes flexibility accuracy and reliability in a cost-effective package.

Hydrogeological applications such as groundwater exploration use the resistivity technique as the main exploration tool. SARIS provides the user with a self-contained user-friendly water exploration instrument.

Migration of ground water pollution is easily monitored and measured using SARIS. Plumes of contaminate leaching out of a landfill site for example is of great concern. SARIS may be used for this application in either its standard configuration or alternatively as part of a permanent electrode array. With this type of array repetitive readings are taken over time to give a truer picture of the possible contamination.

Geotechnical, Engineering and Archaeological applications have also been addressed using the resistivity technique, SARIS simply allows you to do this better.

IP MEASUREMENTS

SARIS is also capable of providing 4 windows of Induced Polarization (IP) data. Having both the IP and resistivity information is quite useful for distinguishing between materials such as clay and water. Although these may exhibit similar resistivity responses the IP response will be different.

LARGE DISPLAY
QUARTER SIZE VGA
MONOCHROME
LCD

CURRENT ELECTRODE
TERMINALS

POTENTIAL ELECTRODE
TERMINALS

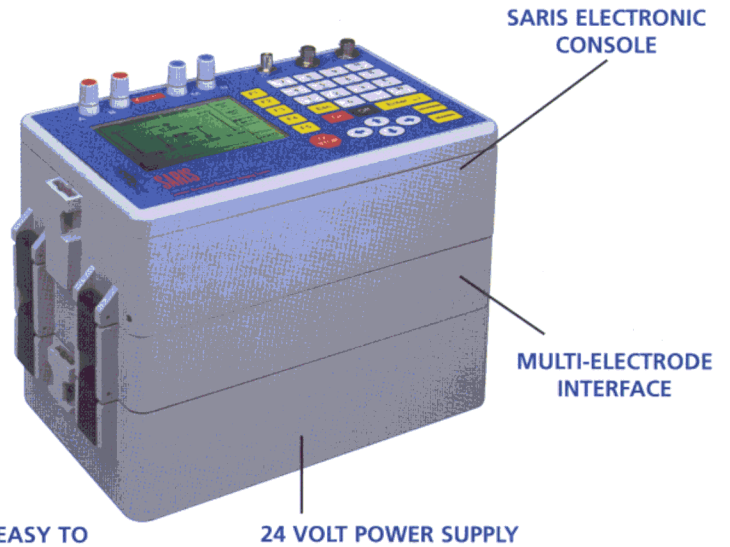
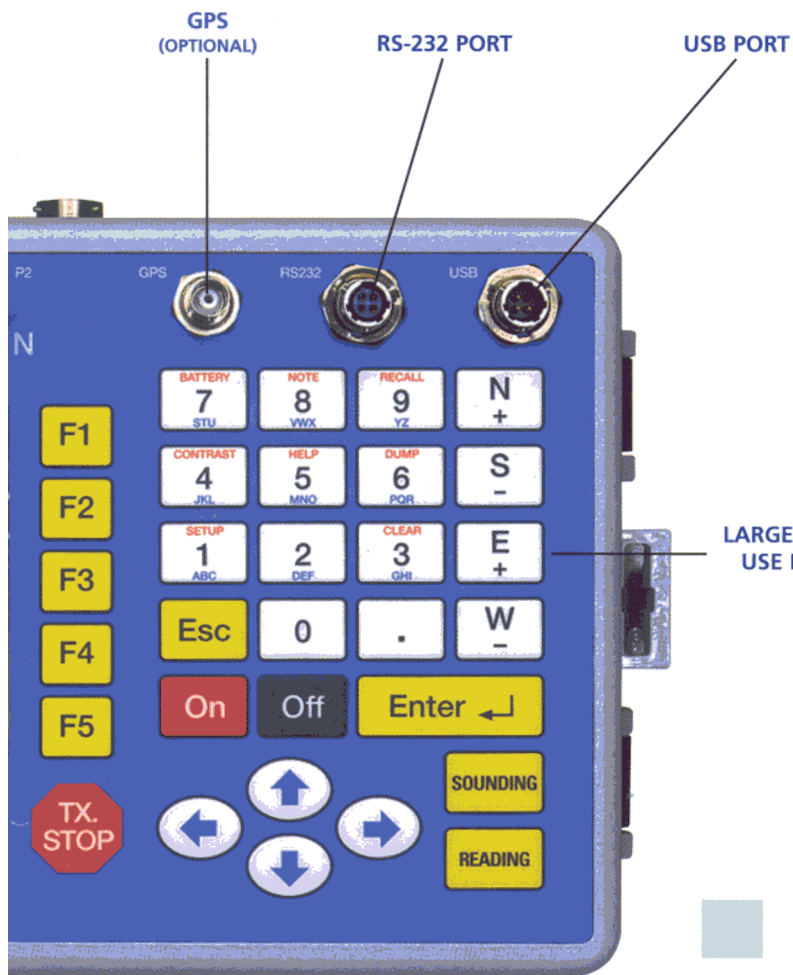


DATA INVERSION

SARIS offers a 1-D inversion of your data in the field. This feature gives the user the benefit of being able to, in virtually real time, analyze the resistivity sounding and determine the quality of the data in the field.

ADVANCED ELECTRONICS

SARIS uses a state of the art microprocessor and proprietary software to control this revolutionary step in resistivity instrumentation. Highspeed components allow for rapid and reliable readings to be



LARGE EASY TO USE KEYPAD

24 VOLT POWER SUPPLY

- ▶ Combined Resistivity Transmitter and Receiver
- ▶ Hi-Power, 100 Watts, 500 Volts, 1 Amp
- ▶ 4 IP Windows
- ▶ 1-D Inversion in the field
- ▶ Micro-processor controlled, internal flash memory, graphics display
- ▶ Supports intelligent multi-electrode cable systems without external switchboxes or computers
- ▶ Multi-electrode cables are automatically expandable and are built to meet your requirements
- ▶ Modular, stackable design allows for future expansion
- ▶ Automatic current adjustment to minimize power consumption
- ▶ Reliability, Convenience, Accuracy

saris

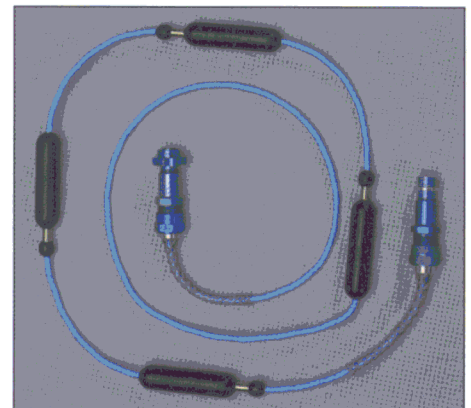
taken. SARIS does not require an external data storage device, computer or switch box, these are all conveniently packaged in one. A large internal data storage capability, a large quarter VGA monochrome screen and a windows style user interface make this instrument a pleasure to operate.

INTELLIGENT ELECTRODES

SARIS may be either used in a "traditional" mode where single wires are inserted into convenient to use binding posts, or the intelligent multi-electrode cable array. A multielectrode cable interface is added to the SARIS. This interface allows for

automatic cable recognition and electrode switching for various kinds of arrays. These cables may be custom designed to meet your specific survey requirements.

At each electrode takeout is a small printed circuit board housed in a waterproof protective assembly. This allows each cable segment to be "daisy-chained". This means that should you wish to expand your array you simply connect another cable on the end of your existing cable and SARIS will be able to address each new electrode in the added cable. With this sophistication SARIS can support more than 65,000 addressable electrodes.



SARIS SPECIFICATIONS

Output Power:	up to 100W
Output Current:	up to 1.0A
Output Current Precision:	+/- 1.25%
Maximum Output Voltage:	up to 500V
Input Impedance:	11M Ω
Input Voltage Range:	up to 40V
Input Voltage Precision:	+/- 1%
Input Resolution:	0.6 μ V
Dynamic Range:	156dB (27 bit equivalent while using a 16 bit converter)
Noise Rejection:	98dB power line rejection
SP Compensation:	0 to 1 V, automatic
DV/I Precision:	1%
Cycle Time:	5 or 6 Hz for Resistivity, 1,2,4,8 seconds for IP
Number of Cycles:	Automatic, 1 to ∞
Number of IP Windows:	4
IP Chargeability:	0.1 mV/V
Overall Accuracy:	+/- 1%
Ambient Temperature:	-20°C to +55°C
Environmental:	IP64 environmental protection (waterproof)
Power Supply:	24 Volt
Measuring Capacity:	>10,000 (depends on load)
Memory Capacity:	>10,000 readings
Display:	320 by 240 quarter VGA monochrome graphic display
Interface:	RS-232 and USB
Dimensions - excluding connectors	
Basic system with battery:	336 * 190 * 177 mm
Multi-Electrode Interface:	336 * 190 * 60 mm
Weight	
Basic system with battery:	8.9 kg
Battery only:	6.4 kg
Multi-Electrode Interface:	1.4 kg

OPTIONS

BOOSTER

Not required. The SARIS provides more output power from the standard instrument than most other instruments with a booster.

BOREHOLE LOGGING SYSTEM

For shallow logging operations the SARIS Logging Option may be used for depths up to 200 metres. Measured parameters are resistivity, SP, fluid conductivity and temperature.

CABLE SYSTEMS

Using the SARIS Multi-Electrode Cable Interface allows the use of "Intelligent electrode" Imaging or Sounding cable systems that are built to order. Each standard Imaging cable has 25 takeouts on it with user defined spacing for each takeout. The number of takeouts and the spacing between them may be built to your specifications. Each cable system come with the appropriate number of stainless steel electrodes and connector clips. SARIS cable systems provide the unique feature of being able to expand your array by simply connecting additional cables to the end of one another. Specialty Cables and Arrays are quoted upon request, consult with your Scintrex representative for advice on a cable system to meet your needs.

GPS* Options may be quoted upon request.

SOFTWARE* Software processing, interpretation and presentation offered upon request.

TRAINING* Training programs may be provided either at our offices or at your location to meet your requirements.

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Due to continuing product improvements these specifications are subject to change