

ARES - AUTOMATIC RESISTIVITY SYSTEM



One ruggedized weatherproof unit integrates a powerful transmitter and a sensitive receiver completed with a rich software support for a variety of measuring methods.

Transmitter:

Power	up to 850 W
Current	up to 5.0 A
Current resolution	24 bits
Voltage	2000 V _{p-p} (actually applied voltage automatically level of measured potential)
Protection	full electronic protection

Receiver:

Input voltage range	±5 V _{p-p} (±10 V _{p-p} optionally)
Voltage resolution	24 bits
Input impedance	20 MΩ
Mains frequency filtering	50 or 60 Hz selectable notch filter

Measuring methods:

- 2D/3D Multi-Electrode Resistivity and IP Tomography
- VES - Vertical Electrical Sounding (resistivity and IP)
- RP - Resistivity and IP Profiling
- SP - Self Potential

Supported arrays:

- Wenner Alpha / Beta / Gamma, Wenner-Schlumberger, Dipole-Dipole, Pole-Dipole, Reverse Pole-Dipole, Pole-Pole, MGM, Equatorial Dipole-Dipole, Cross-Hole, Borehole-Surface, user defined configurations

Measurement - features:

- Self-adapting control system
- Automatic ranging and calibration
- Automatic pulse cycling and checking of measured values
- Easy interruption of the measurement
- Capability of profile prolongation by means of multi-electrode cable rolling
- Total accuracy: better than 1% (typically)
- IP - Induced Polarization (Chargeability): up to 10 adjustable IP-windows, each max. 30s, step 20 / 16.66ms
- Pulse: 0.3 s - 30 s, step 0.1 s
- SP compensation: constant and linearly varying SP cancellation
- Stacking: manual or automatic (with self-adaptive setting) adjustable optimum measured voltage and maximum acceptable measurement error
- Stored values: position of the measured point, output current, input voltage, SP, apparent resistivity, standard deviation, chargeability with standard deviation for up to 10 IP windows
- Number of electrodes: max. 200 in one array
- Line length for ME cable: max. 10 km

Control unit

- Easy-Control system, no need of PC for the measurement
- Alphanumeric keyboard, large LCD display
- Measuring system can be upgraded via Internet
- Safety switch
- Memory: 16Mbit, up to 100 files, 70000 readings
- PC interface: RS232 and USB
- PC software: provides data download and export for processing programs (RES2DINV / RES3DINV, Surfer, IPI2WIN and others) as well as upload of measuring procedures
- Power supply: 12 V car battery, 12 V attachable battery pack or generator AC/DC adapter for office
- Connectors: for PC, battery and a universal one for all measuring accessories (Multi-Electrode Cable, VES-Adapter, Switch box), measuring current and potential clamps
- Dimensions: 15 x 21 x 40 cm
- Weight: 5.9 kg
- Ambient conditions: -10°C to +60°C, weatherproof