

ARES AUTOMATIC RESISTIVITY SYSTEM



1100 Vp-p - 2 A - 300 W

Resistivity & IP
up to 10 adjustable IP windows

2D/3D Resistivity Tomography
Multi - Electrode Arrays, VES, RP, SP

Easy-Control System

Applications:

groundwater explorations, geotechnical investigations, measurements on dams and dikes, environmental studies, geological surveys, mineral prospecting, archaeology and many others.

ARES represents a new well equipped resistivity and IP imaging system of the third generation designed by GF Instruments.

Its variability, easy operation (without PC), feeding from a standard 12 V battery and compatibility with widespread interpretation software makes ARES a cost effective and useful tool for working groups and research teams.

ARES - Technical Specifications

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

Transmitter

Power	up to 300 W (ARES-G4), up to 200 W (ARES-G3)
Current	up to 2.0 A (ARES-G4), up to 1.25 A (ARES-G3)
Voltage	10 - 550 V (1100 Vp-p)
Protection	full electronic
Precision	0.5%

Receiver

Input impedance	20 M Ω
Input voltage range	5 V
Mains frequency filtering	50 or 60 Hz
Precision	0.1%

Supported methods

2D/3D Multi-Electrode Resistivity Tomography	Wenner Alpha / Beta / Gamma, Wenner-Schlumberger, Dipole-Dipole, Pole-Dipole, Reverse Pole-Dipole, Pole-Pole, MSG, user defined configurations possibility of simultaneous measurement of up to 8 methods
VES - Vertical Electrical Sounding	Schlumberger, Wenner, dipole-dipole, pole-dipole, pole-pole, user defined configurations
RP - Resistivity Profiling	Wenner Alpha / Beta / Gamma, Wenner-Schlumberger, Dipole-Dipole, Pole-Dipole, Pole-Pole, MSG
SP - Self Potential	

Measurement - features

IP - Induced Polarization (Chargeability)	self-adapting control system, automatic ranging and calibration automatic checking of measured values easy interruption of the measurement (for the first view of measured structures) capability of profile prolongation by means of multi-electrode cable rolling available for all 1D / 2D / 3D methods up to 10 adjustable IP windows, each max. 30 s, step 20 / 16.66 ms
Pulse	0.3 s - 30 s, step 0.1 s
SP compensation	constant and linear, time-invariant
Stacking	manual or automatic self-adaptive setting
Measurement optimization	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 all 10 IP windows RES2DINV / RES3DINV, Surfer (and others)
Output data format	200 for 2D, 1000 for 3D arrays
Maximum number of electrodes	10 km
Maximum profile length	
Control unit	Easy-Control system, no need of PC for the measurement alphanumeric keyboard, large LCD display safety switch
Memory	16 Mbit, up to 100 files, 70000 readings
Interface	RS232 or USB
Power supply	12 V car battery or attachable battery pack
Connectors	for PC, battery and a universal one for all measuring accessories (Multi-Electrode Cable, VES-Adapter ...)
Dimensions	13 x 17 x 39 cm
Weight	3.5 kg

Standard Accessories:

- Transport case
- T-piece (for connection of multi-electrode cable sections and cables for current and potential electrodes)
- Cable for external 12 V battery
- RS232 and USB cables
- Measuring software ARES

Optional accessories:

(subject to continuous development)

- 12 V battery pack
- Fast 3-stage battery charger
- AC adapter (for all countries)
- 2D / 3D multi-electrode cable sections
- Accessories for measurement of large 3D multi-electrode arrays
- VES-adapter (for 5 pairs of potential electrodes)
- Cable reels
- Standard electrodes, non-polarisable electrodes
- Interpretation and mapping software



Ječná 29a, 621 00 Brno, Czech Republic
Tel.: +420 541634 366, 285
Fax: +420 541634 260
E-mail: gregor@gfinstruments.cz
www.gfinstruments.cz

REPRESENTED BY:

With reservations for changes