

IRIS INSTRUMENTS

VIP 4000

RESISTIVITY & IP

4 kW

TRANSMITTER



- 3000V output voltage
- Full microprocessor control
- Ease-of-use
- Standard motor generator

The **VIP 4000** is a **four kilowatt** current regulated Time Domain Induced Polarization transmitter.

VIP 4000 MAJOR BENEFITS

- Light in weight and provided with a high voltage (3000V) output, the VIP 4000 is particularly convenient for IP surveys in high resistivity rugged areas and for deep resistivity soundings.
- Microprocessor controlled for ease of operation and protection against misuse. All injection parameters (current, voltages, ...) are controlled. The VIP 4000 can also be operated through its remote control port (RS232).
- The VIP 4000 eight output dipoles provide for higher productivity in the field. Powered from a standard single phase motor generator, the VIP 4000 eliminates the maintenance and supply problems associated with custom power sources.

VIP 4000 MAIN FEATURES

HIGH OUTPUTS:

- The VIP 4000 will generate up to 3000 volts for work in high resistivity areas and up to 5 amperes at 800 volts for low resistivity regions. With its weight of only 16kg, the VIP 4000 is the lightest 4000W unit on the market.

FULLY AUTOMATED:

- The VIP 4000 is designed **for ease of operation**. It has a much simplified front panel: current, dipole and frequency (in the frequency domain) settings are the only parameters to be selected by the operator. All the other functions, like voltage range setting, are fully automated.

PROGRAMMABLE:

- **Programming functions** are also available, either through the front panel, with a special key combination, or from an external computer terminal. These functions are used to select the parameters and options that are not normally changed during a survey: operating mode, time or frequency domain, cycle time, frequencies, ...
- This approach reduces front panel cluttering and drastically reduces the possibility of operator mistake. **Instrument reliability** is also increased. For example, it is not possible to switch dipoles when transmitting. This eliminates the possibility of burning out the selector switch or the output circuitry.

HEAVY DUTY DESIGN:

- Very high quality connectors, and heavy duty industrial components are used throughout. The VIP 4000 is shock resistant and weatherproof, for a higher reliability.



VIP 4000

COMPLETE DISPLAY:

A back-lighted liquid crystal alphanumeric display is provided for the simultaneous indication of **all output parameters**. Output current, output voltage, contact resistance and output power are continuously displayed.

ERROR MESSAGES:

Messages and warnings are displayed in case of problem or malfunction. Besides, the permanent storage of all the parameters relating to the operation of the unit make easier the remote identification of a trouble by the manufacturer for quicker instrument servicing.

INTELLIGENT REGULATION:

The VIP 4000 internal microprocessor is capable of **excellent current regulation** in almost any load. Current is operator selectable in preprogrammed steps from 5 mA to 5 amperes. A lower current, down to 5 mA, can be selected in case of high grounding resistance. Intelligent current adjustment algorithms are always in operation. For example, as the contact resistance may occasionally be too high for the VIP 4000 to provide the requested current setting, it will then display a warning message and will set the current to the maximum value allowable under that combination of current setting and contact resistance.

Some reserve current capacity will always be kept to insure that the current stays constant during the measurements, whatever the contact resistance fluctuations.

REMOTE CONTROL:

The VIP 4000 includes a remote control port. By using radio modems, it can be operated from a remote location. The VIP 4000 can also be linked to an intelligent receiver, or to a computer, for the automatic recording of current settings. Finally, synchronization with a receiver or system is also possible in both directions (i.e. Rx to Tx or Tx to Rx).

WORKS WITH ALMOST ANY POWER GENERATOR:

The VIP 4000 IP transmitter can be powered by almost any motor generator providing a nominal 230V, 45-450 Hz output, single phase, at a suitable kVA rating. It will also work at about half power with a 110V power generator. Low cost commercial generator sets, available at local hardware or equipment rental stores are perfectly suitable

VIP 3000

A three kilowatts version, VIP 3000, is also available (maximum output power of 3000W).

TECHNICAL SPECIFICATIONS

- Output Power: 4000 W maximum
- Output Voltage: 3000 V maximum
- Automatic voltage range selection
- Output Current: 5 amperes maximum, current regulated
- Current accuracy: better than 1%
- Current stability: 0.1%
- Dipoles: 8, selected by push button

TIME DOMAIN MODE:

- Waveform: ON+, OFF, ON-, OFF, (ON = OFF) preprogrammed cycle.
- Automatic circuit opening in off time.
- Preprogrammed ON times from 0.5 to 8 seconds by factor of two.

FREQUENCY DOMAIN MODE :

- Waveform: Square wave,
- Preprogrammed frequencies from 0.0625 Hz to 4 Hz by factors of 2.
- Alternate or simultaneous transmission of any two frequencies.
- Time and Frequency Stability: 0.01%.
- Display: Alphanumeric liquid crystal display.
- Simultaneous display of output current, output voltage, contact resistance, and input power
- Protection: Short circuit at 50 ohms, Open loop at 60000 ohms, Thermal, Input overvoltage and undervoltage.

- Remote Control: Full duplex RS-232A, 300-19200 bauds.
- Direct wire synchronization for on-time and polarity.

GENERAL FEATURES :

- Dimensions (h w d): 41 x 32 x 24 cm.
- Weight: 16 kg
- Power Source: 175 to 270 VAC, 45-450 Hz single phase (works at about half power with a 110V source).
- Operating temperature: -40 to +50 °C.

VIP 4000 LOAD LIMITS

