



VIP 10000

IP/Resistivity Transmitter

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1.0 KW Power IP/Resistivity Transmitter

Features

- 3000V output voltage
- 20A output current
- Standard Motor Generator

General

The VIP family of transmitters is now available in a 10000 watt version. The VIP 10000 is a power current regulated Time and Frequency Domain electrical transmitter.

VIP 10000 Major Benefits

The VIP 10000 will generate up to 3000 volts which makes it very convenient for IP surveys in high resistivity areas and for very deep resistivity soundings.

Microprocessor controlled for ease of operation and protection against misuse, all injection parameters (current, voltages,...) are controlled. The VIP 10000 can also be operated through its remote control port (RS-232).

The VIP 10000 can either be operated with a three phase, 45 to 800 Hz motor generator for maximum power supply or with a standard

220 V single phase motor generator for lower output power. This flexibility allows the operator to use a standard motor generator when maximum power is required or lighter motor generator that is easily available in most geographical areas when the output power required is lower.

High Output

In medium and high resistivity areas, the amount of current driven into the ground depends on the maximum output voltage provided by the transmitter, in addition in low resistivity areas, it is also dependent on the maximum output power.

The VIP 10000 features the following major benefits:

- High output voltage: 3000V
- High output power: 10kW
- High output current: 20A

Standard Motor Generator Supply

In surveys requiring large power, a key practical problem is the local availability of a motor generator. Being powered by a standard motor generator, the VIP 10000 offers the highest flexibility in its class. Its power input requirements are:

- 180 to 250V voltage for maximum output power

- 45 to 800 Hz frequency
- Three-phases for maximum output power
- One phase for lower output power
- Motor generator or power line supply

The operation of the VIP 10000 with such a large range of power sources drastically reduces the transportation and maintenance problems inherent to field survey constraints.

Full Microprocessor Controlled

Full Microprocessor control of the VIP 10000 allows the following basic benefits:

- Ease of use through interactive menus
- User friendly selection of the current value
- Continuous display of output current, voltage, power, ground resistance values
- Display of intelligent messages and warnings in case of a problem: overload, short circuit, input under or overvoltage.

The VIP 10000 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 other functions, like voltage range setting, are fully automated.

Programming functions are also available, either through the front panel, with a suitable key, or from an external computer. These

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INDUCED POLARIZATION SYSTEMS

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, etc.

Intelligent Regulation

The VIP 10000 internal microprocessor is capable of excellent current regulation at almost any load. Current is operator selectable in preprogrammed steps from 20mA to 20 amperes. Intelligent current adjustment algorithms are always in operation. For example, the contact resistance will occasionally be too high for the VIP 10000 to provide the requested current setting. In such cases, the VIP 10000 will display a warning message and will set the current to the maximum value allowable under that combination of current setting and contact resistance. Some reserved 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 10000 is provided with a remote control port. By using radio modems it can be operated from a remote location.

The VIP 10000 can also be linked to an intelligent receiver such as the ELREC 6 or the ELREC 10, or to a computer for the

automatic recording of current settings. Finally, synchronization with a receiver or system is also possible on both directions (i.e. Rx to Tx or Tx to Rx).

Complete Display

Large backlit LCD alphanumeric display is provided for the simultaneous indication of all output parameters. Output current, output voltage, contact resistance and output power are continuously displayed.

Heavy Duty Construction

Very high quality connectors, and heavy duty industrial components are used throughout. The VIP 10000 is shock resistant and weatherproof for a higher reliability.

Specifications

Output Power: 10000VA

Output Voltage: 3000V maximum, automatic voltage range selection

Output Current: 20 amperes maximum, current regulated

Current Accuracy: Better than 1%

Dipoles: 1

Output Connectors: Connectors accept bare wire or plug of up to 4mm diameter

Fall Times: Better than 1 msec in resistive load

Time Domain Waveforms: Preprogrammed on and off times from 0.25 to 8 seconds by factor of 2. Other cycles programmable by user. Automatic circuit opening in off time.

Frequency Domain Waveforms:

Preprogrammed frequencies from 0.625Hz to 4Hz by factor of 2. Alternate or simultaneous transmission of two frequencies. Other frequencies programmable by user.

Time and Frequency Stability: 0.01%, 1 PPB optional

Display: Alphanumeric liquid crystal display. Simultaneous display of output current, output voltage, contact resistance and input power/

Power Sources: -180 to 250 VAC. 45-800Hz three phase regulated motor generator; -175 to 275 VAC. 45-450 Hz single phase motor generator

Protection: Short circuit at 20 ohms, Open loop at 60000 ohms, Thermal, Input overvoltage and undervoltage

Remote Control: Full duplex RS-232 cable, 300-19200 bauds. Direct wire sync. for on-time polarity

Miscellaneous

Dimensions: 55 x 51 x 37cm

Weight: 35kg

Operation Temperature: -40°C to +50°C

Standard Components

VIP 10000 console, programming key, RS-232 interface cable, motor generator cable, instruction manual and shipping case.

Ordering Information

Description	Order Number
VIP 10000 Transmitter.....	500-190-0030
Programming Key.....	500-190-0031
MG-12/12KVA MotorGenerator	500-190-0040

