

# IRIS INSTRUMENTS



## VIP 10000

**10 kW**

**IP TRANSMITTER**

- Up to 3000V, 20A
- Standard motor generator

### 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 10 000 offers the highest flexibility in its class. Its power input requirements are:

- 180 to 250 V 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 10 000 with such a large range of power sources will drastically reduce the transportation and maintenance problems inherent to the field survey constraints.

### HIGH OUTPUT SPECIFICATIONS

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 10 000 features the following major benefits:

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

### FULL MICROPROCESSOR CONTROL

The full microprocessor control of the VIP 10 000 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 or malfunction: overload, short circuit, input, under or overvoltage ....



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# VIP 10 000

## FULLY AUTOMATED:

The VIP 10 000 is designed for ease of operation. It has a much simplified front panel: current setting is the only parameter 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 thus increased.

## REMOTE CONTROL:

The VIP 10 000 is provided with a remote control port. By using radio modems, it can be operated from a remote location. The VIP 10 000 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).

## INTELLIGENT REGULATION:

The VIP 10 000 internal micro-processor is capable of excellent current regulation in almost any load. Current may be selected by the operator in preprogrammed steps from 50 mA to 20 amperes. Intelligent current adjustment algorithms are always in operation. For example, the contact resistance will occasionally be too high for the VIP 10 000 to provide the requested current setting. In such cases, the VIP 10 000 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 reserve current capacity will always be kept to insure that the current stays constant during the measurements, whatever the contact resistance fluctuations.

## 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.

## HEAVY DUTY CONSTRUCTION:

Very high quality connectors, and heavy duty industrial components are used throughout. The VIP 10 000 is shock resistant and weatherproof, for a higher reliability.

## Technical specifications

- Output Power: 10 000 W maximum
- Output Voltage: 3000 V maximum
- Automatic voltage range selection
- Output Current: 20 A maximum, current regulated
- Current accuracy: better than 1%
- Current stability: 0.1%
- Output Connectors: connectors accepts bare wire or plug of up to 4 mm diameter.

## 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: Four lines alphanumeric liquid crystal display.
- Simultaneous display of output current, output voltage, contact resistance, and input power

- Protections: Short circuit at 10 ohms, Open loop at 60000 ohms, Thermal, Input overvoltage and undervoltage.

- Direct wire sync of on-time and polarity

## POWER SOURCE:

175 to 270 VAC, 45-800 Hz, three-phases for maximum power (works at reduced power with a single phase )

## GENERAL FEATURES :

- Dimensions (h w d): 55 x 51 x 37 cm.
- Weight: 35 kg
- Operating temperature: -40 to +50 °C.

