



HOW TO DRAW THE MAXIMUM CURRENT FROM AN INDUCED POLARIZATION TRANSMITTER

An Induced Polarization transmitter features three main specifications:

- its maximum output current **I_{max}**
- its maximum output power **P_{max}**
- its maximum output voltage **V_{max}**

The value of the current which is driven into the ground depends on the one hand on the value of the ground resistance R of the electrodes and on the other hand on the three previous specifications:

- a- for low ground resistances, the current is limited by the maximum output current of the transmitter:
 $I = I_{max}$
- b- for medium ground resistances, the current is limited by the maximum output power of the transmitter:
 $I = (P_{max} / R)^{1/2}$
- c- for higher ground resistances, the current is limited by the maximum output voltage of the transmitter:
 $I = V_{max} / R$

EXAMPLES (see diagram)

a- for a ground resistance of 30 Ohms:

the current is 20A for a VIP 10 000
 the current is 10A for a VIP 5 000
 the current is 5A for a VIP 4 000
 the current is 5A for a VIP 3 000

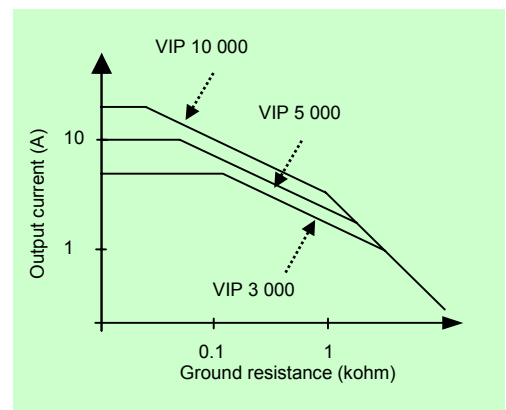
b- for a ground resistance of 300 Ohms:

the current is 5.7A for a VIP 10 000
 the current is 4.0A for a VIP 5 000
 the current is 3.6A for a VIP 4 000
 the current is 3.1A for a VIP 3 000

c- for a ground resistance of 3 000 Ohms:

the current is 1A for a VIP 10 000
 the current is 1A for a VIP 5 000
 the current is 1A for a VIP 4 000
 the current is 1A for a VIP 3 000

PRODUCT name	Power kW	Voltage V	Current A
VIP 3 000	3	3000	5
VIP 4 000	4	»	»
VIP 5 000	5	»	10
VIP 10 000	10	»	20



PRACTICAL CONSIDERATIONS

As a consequence of previous physical laws, it is recommended to always try to decrease the ground resistance of the electrodes as much as possible so to draw the maximum current from a given transmitter.

The current of the VIP transmitters increases logarithmically by pressing the "I↑" key of the front panel. When getting nearer from the maximum theoretical value of the current, it is recommended to increase by step of 100mA by pressing the "I↑" key and then the "R" key until the new value of the current appears on the LCD display.