

Application note

PIN-OUT & DESCRIPTION OF SUBD 25 PIN FEMALE CONNECTOR

The generator can be remote controlled if the connector (23) is plugged following the pinout indicated below and if pin 8 is connected to ground.

As soon as the connection is done, Remote Control led (11) lights up.

Operating in Remote Control mode is the same as in Local mode.

In this mode, all local resources are inoperative except:

- Reading the setting values with Preset push button (10)
- Voltage display and Current display (16) and
- Stopping HV delivery is always possible by pushing HV off button (03)

(23) located on rear panel (only available on standard models without GPIB options):

Pin	Signal	Signal Description	Way
1	Hv-Off Control	produced by a fleeting opening of the ground (pin16)	Input
2	Fault Monitor	Fault information 0V = Fault ; +15V** = no default	Output
3	Interlock Monitor	Open Interlock information 0V = open; +15V** = Closed	Output
4	Hv-On Control	produced by a fleeting closure to the ground (Pin16)	Input
5	Voltage Monitor*	0 to 10 V = 0 to 100% of output voltage	Output
6	Current Monitor*	0 to 10 V = 0 to 100% of output current	Output
7	Inhibit Control	Activated by a TTL or a CMOS signal (3.3 to 24V)	Input
8	Remote Control	Activate when this pin is connected to ground (Pin16)	Input
9		NC	
10	Mains Monitor	0V = Mains is correct ; +15V** = Mains is not correct	Output
11	Power Monitor* (only on LPR model)	0V to 10V = 0 to 100% of the Output Power (only on LPR model)	Output
12	Copy of Local Voltage Setting	0-10 V copy of the Voltage setting selected with the front panel potentiometer	Output
13	Copy of Local Current Setting	0-10 V copy of the Current setting selected with the front panel potentiometer	Output
14	Current Setting	Output current setting 0 to 10 V = 0 to 100%	Input
15	+10V Reference	+10,00V, 5 mA Max	Output
16	0V Digital Ground Ref.	0V Ground reference for digital signals	Output
17	Voltage setting	Output voltage setting 0 to 10V = 0 to 100%	Input
18	Regulation Monitor End of Charge Monitor	0V = Current Regulation 15V**= End of charge (CCR) or Voltage Regulation (SR or LPR)	Output
19	Hv-On Monitor	0V = HV off ; +15V** = HV on	Output
20	0V Analog. Ground Ref.	0V Ground reference for Analog signals	Output
21		NC	
22		NC	
23		NC	
24	Interlock Control	Interlock order : Connect this pin to Digital Ground (pin 16) for closing Interlock <i>Except for models with 2 points Lemo connector</i>	Input
25	+10V Reference	+10,00V, 5 mA Max	Output

* On a serial 470 Ω impedance

** +15 V limited to 10mA

The cable of REMOTE connection has mandatory to be shielded and no longer than 3 meters.

Programming example

For a 20 KV, 1500 W generator: $V_{max} = 20 \text{ KV}$, $I_{max} = 75 \text{ mA}$
 Wished values: output voltage = 8 KV, output current = 60 mA
 Pin 17 (voltage setting) has to be: 4 Volts and pin 14 (current setting): 8 Volts

The same scale for reading output values:
 A 10 Volts voltage on pin 5 (image of the HV voltage) will indicate the generator is delivering 20 kV and a 4 V voltage on pin 6 (image of the current) will indicate the Output current is 30 mA.

Management of Voltage and Current settings in remote control

Two modes of control can be used:

- 1) Standard remote control
 For remote controlling voltage and current, an external 0-10V signal has to be sent on pins 14 and 17.
- 2) Control by front panel
 For setting voltage and current from the potentiometers located on front panel, following connections have to be realized:
 - pin 12 to pin 17 for voltage
 - pin 13 to pin 14 for current

