

The high voltage power supply is used to modulate the anode of the microwave tube. It is floating at cathode potential of -70kV DC and has a voltage rise time of 2ms to reach 35kV when operated remotely with an analog input of 0-10V DC.

### Features:

- Floating on -70kV DC
- Rise Time of 2 msec
- Low Stored Energy
- All Controls Via Optical Fibre Links



### TECHNICAL SPECIFICATIONS

PARAMETER	SPECIFICATION
Input Voltage	230V $\pm$ 10% AC, 50Hz, single phase
Output Voltage	0 to 35 kV DC
Output Current	0 to 100 mA
Maximum Static Output Power	3.5kW
Polarity	Positive with respect to cathode potential
Voltage Rise Time	< 2ms
Mode of Regulation	Constant voltage
Voltage Regulation:	
Load	< 0.1 % of full output voltage
Line	< 0.1% of full output voltage
Current Regulation:	
Load	<0.1% of full current $\pm$ 100 $\mu$ A at any voltage
Line	<0.1% of full current over specified input
Maximum Leakage Current	50 $\mu$ A at -70kV DC floating
Protections	Against overload, over current trip, thermal switches, arc quenching resistors, arc quench, arc sensing, external interlocks, remote HV enable/disable and continuous short circuit
Special Protections	Designed to withstand dynamics caused due to surface discharge inside the chamber The output voltage changes from -70kV to 0 kV in 10 $\mu$ s during crowbar operation which is done when a fault is identified in the microwave tube Short circuit of the -70kV DC source Fibre optic isolation of -70kV DC for all analog & digital signals Isolation between power supply module and control module Door interlocks Resin cast for isolation transformer
Front Panel	Display meters for voltage and current monitor Selector switch for local/remote mode selection

Controls & Signals on Control Panel at Ground Level	Voltage continuously adjustable over entire range via 10 turn potentiometers with lockable counting dials. Switch for remote ON/OFF 3½ digit meters for voltage and current monitoring
Remote Controls & Signals	Current & voltage controls through 0-10V DC analog signals Current & voltage monitor through 0-10V DC analog signals
Long Term Voltage Stability of Reference	100 ppm/°C
Size	MS cabinet, powder coated

For any queries or customization requests contact us at [info@ionics.co.in](mailto:info@ionics.co.in)

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