

5kV EHT Power Supply

Introduction

The unit is designed to operate spark counters, Teltron discharge tubes, electric fields apparatus and for use in investigations into charge and current, and electrostatics.

Outputs

The continuously variable source of smoothed d.c. from 100V to 5kV is provided. The outputs are controlled by a single knob and indicated on a 14mm high 2 digit LED display on the front panel.

The outputs provided, which are taken from five 4mm shrouded sockets colour-coded red/black/blue, are:

- (i) 100V to 5kV d.c. maximum short circuit current 3mA
- (ii) 100V to 5kV d.c. maximum current 60 μ A (limited by 50M Ω resistor)
- (iii) 100V to +2.5kV or -100V to -2.5kV d.c. using centre tap socket colour-coded blue.

NOTE

To ensure that the oscillator in the unit continues to function at low outputs, there may still be an output of up to 100V when the control is turned to minimum. For this reason, it is advisable to switch off the unit before making any alterations to the external circuitry.

The d.c. outputs above are fully floating to provide negative voltages if required and enable either the positive or negative side to be connected to earth and/or one side of the filament supply without danger of damaging the unit.

In addition, a low voltage a.c. output is available via a pair of 4mm shrouded sockets, colour-coded white, to provide a supply of 6.3V 2A a.c. for operating valve filaments or lamps. This circuit is insulated to withstand EHT voltages. A separate 4mm shrouded socket, colour-coded green, provides an earth connection.