

## Model Number: BPS-3P1

### Description

The BPS-3P is a mains driven voltage power supply unit with three positive high voltage outputs and 0V output. The unit is designed for the operation of single plate intensifiers and dual plate VID devices.

### Features of this unit are:

- Three variable high voltage outputs each with a 3½ digital LCD display.
- Each display is switch-able between voltage and current.
- Master control potentiometer for simultaneous adjustments of all three outputs.
- Tracking facility: i.e. V2 has the voltage on V1 automatically added to it and V3 and V2 automatically added to it.
- Short circuit and flash-over protection on all outputs.
- Dimmer back-light facility for LCD displays.

### The three high voltage outputs are:

- V1 0 to +1000 V variable (Maximum Output +1000 V)
- V2 0 to +1000 V variable + V1 (Maximum Output +2000 V)
- V3 0 to +5000 V variable + V2 (Maximum Output +7000 V)

(The output voltage are factory limited to the above levels, however these can be set to higher values if required for the customers application, see safety section for actual maximum outputs of the modules contained within this unit).

### Current measurements:

- V1 199.9  $\mu$ A Full Scale Deflection
- V2 199.9  $\mu$ A Full Scale Deflection
- V3 199.9  $\mu$ A Full Scale Deflection

**NOTE: The output minimum of any channel may not be 0V, there will always be a nominal 10V appearing in any channel.**

### Safety:

The high voltage models contained within the BPS-3 have maximum current capabilities as follows:

- V1(+1 kV module) 10 mA
- V2(+2.5 kV module) 4 mA
- V3(+10 kV module) 1 mA

The maximum output energy that can be delivered by any one of these modules is limited to four joules for user safety.

**If a capacitive load is connected across any output, the energy stored may exceed this non-fatal limit.**

## Front Panel Controls

### Master

This is a single turn potentiometer for master control of all outputs. When this control is fully anti-clockwise all outputs will be at minimum output. When fully clockwise each output may be set to the desired voltage.

### V1 Control

This is a ten turn potentiometer which is used to set the output of the 1 kV unit.

### V2 Control

This is a ten turn potentiometer which is used to set the output of the 2.5 kV unit. The V2 output will automatically track the voltage on the V1 output and the voltage set by this control will add to that output.

### V3 Control

This is a ten turn potentiometer which is used to set the output of the 10 kV unit. The V3 output will automatically track the voltage on the V2 output and the voltage set by this control will add to that output.

### Voltage/Current Switches

Each output will have the facility to measure both the output voltage or the output current, this may be selected by a switch fitted under the LCD display.

## Rear Panel

### Output Connector

This is a WW Fischer multipole high voltage connector which contains all of the outputs including 0 V connection. The unit will be supplied with a mating half for this connector.

### Mains Input and Selector Switch

The mains input for this unit is via an IEC inlet. This unit also has a mains input voltage selector which allows for the unit to be used on either 110 V/115 V or 220 V/230 V. This switch must be set prior to the unit being powered up.

---

#### Photek Ltd

26 Castleham Road,  
St Leonards on Sea,  
East Sussex, TN38 9NS,  
United Kingdom

T: (+44) 1424 850555  
F: (+44) 1424 850051  
E: sales@photek.co.uk  
W: www.photek.co.uk