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IPC Irwin Powerbase V8 PSU

Part Number IV8000

User Instructions



INTRODUCTION.

The Powerbase V8 is a heavy-duty power supply designed to provide both continuously variable AC and DC voltage supplies up to a current of 8 Amps. In addition, this power supply includes our unique Voltage Limiting System (VLS) which enables the teacher to set and lock a maximum voltage level for the AC or DC output.

DESCRIPTION.

The Powerbase V8 provides both a continuously variable 0-15VAC voltage range and a 0-20VDC (capacitor smoothed) voltage range, both outputs may be used simultaneously up to a combined output current of 8A.

The control panel contains an illuminated (green) mains on/off switch, a voltage adjustment control knob, which is used to select the required output voltage, the approximate voltages are shown surrounding the control. Also fitted to the control knob is the Voltage Limiting System (VLS) disc. The control panel also contains five 4mm output sockets for AC, DC and Earth connections along with an overload reset button. Located at the rear of the unit is a 2.0m power lead with a standard UK mains plug fitted.

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INSTRUCTIONS.

To set the required AC output voltage simply rotate the voltage control knob to the desired voltage using the inner (AC) voltage scale, use the two yellow 4mm sockets to connect to the AC output.

For setting the DC output voltage simply use the outer (DC) voltage scale and use the red (positive) and black (negative) 4mm sockets to connect to the DC output.

The reset button operates if there is a short circuit or overload on either of the outputs in excess of the maximum 8 Amps output. Should the safety cut-out operate, remove the cause of the overload, wait 1 minute for the cut-out to cool before pressing the reset button back in.

Should the mains on/off switch fail to illuminate and there is no output power from the unit, then check the 3A fuse in the UK mains plug is intact.

Please note:- when there is no load connected (or a very small load) the output voltages (AC and DC) are higher than shown on the voltage control scale, for a more accurate measurement of the output voltage a suitable voltmeter or multimeter should be employed.

How to use the Voltage Limiting System.

The Powerbase PSU also includes our unique Voltage Limiting System (VLS), this comprising of a clear disc and locking allen screw, which sets the maximum voltage obtainable, to set the limiter proceed as follows:-

- Set the maximum voltage required using the voltage control knob (as instructed above).
- Loosen the allen locking screw using the key provided to allow the clear disc to turn.
- Rotate the clear disc counter-clockwise until the limiter screw/stud on the disc touches the pointer on the voltage control knob.
- Firmly tighten the allen locking screw using the key to lock the clear disc in place.

SPECIFICATIONS.

Electrical Supply	= 220-240VAC, 50-60Hz
Fuse Ratings	= UK Mains Plug: 3A
Dimensions	= 285 x 185 x 175mm overall.
Mass	= 5.2kg
AC Output Voltage Range	= 0 to 15VAC
AC Output Current	= 8A (Max.)
DC Output Voltage Range	= 0 to 20VDC
DC Output Current	= 8A (Max.)
Voltage Limiting Range	= From 0V to full Voltage (both AC and DC)

Please Note: This Equipment is for Education, Training, or research Purposes Only.

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IMPORTANT- ELECTRICAL SAFETY NOTICE

Only connect the product to single phase mains electrical supply (with neutral nominally at each potential), also check that the supply voltage and frequency are within the products stated range. Before connecting to the mains electrical supply, examine the information on the products rating label (the value of the fuse fitted to the product is also stated), ensure that the mains plug or outlet circuit is fitted with an appropriate fuse of higher value.

WARNING: THIS PRODUCT MUST BE EARTHED

This product is designed for Electrical Safety Class 1.

If a mains plug is not fitted, connect the wires to a Standard UK, 3-pin plug as follows:-

Green/Yellow wire to the terminal marked: E (Earth) or coloured Green or Green/Yellow.

Brown wire to terminal marked: L (Live) or coloured Brown.

Blue wire to terminal marked: N (Neutral) or coloured Blue.

LIVE PARTS SHOULD NEVER BE EXPOSED UNLESS THE PRODUCT HAS BEEN SWITCHED OFF AND ISOLATED FROM THE MAINS ELECTRICITY SUPPLY.

Thank you for choosing this IPC Irwin product, which has specifically been designed for education and we know it will bring you good service long into the future. This is just one product of a wide range of UK designed and manufactured products to enhance a STEM education, please see www.ipcirwin.com website for more details on the products and service we provide to support teaching and learning in science and technology.

IPC Irwin also provide Portable Appliance Testers and a Calibration service, for more details please go to www.ipcirwin.com or call our sales and technical support line on 015395 58555.



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Declaration of Conformity (In Accordance with EN ISO 17050-1:2010).

Manufacturer: **IPC Irwin, Holker School, Cark-in-Cartmel, Grange-over-Sands, Cumbria, LA11 7PQ, United Kingdom.**

Product/Part No: **Powerbase V8 (230V AC, 50Hz main voltage)/IV8000**

This conformity certificate approves the compliance of the product with the essential safety requirements of the following UK Standards and Regulations:

SI 2005 No.1803	General Product Safety Regulation (implements Directive 2001/95/EC).
SI 2016/1101	Electrical Equipment (Safety) Regulation (implements Directive 2014 /35/EU.
EN 61010-1: 2010	Electrical Requirements for Laboratory Test & Measurement Equipment.
EN 61000-6-1: 2019	EMC, Generic Standards, Immunity for Residential, Commercial and Light Industrial Environments.
EN 61000-6-3: 2019	EMC, Generic Standards, Emission for Residential, Commercial and Light Industrial Environments.
SI 2012 No. 3032	Restriction on Hazardous Substances (RoHS) in Electrical and Electronic Equipment Regulation, (implements Directive 2011/65/EU).



Mark can be used only in the case of conformity assessment according to all relevant UK Standards and Regulations.

EU Declaration of Conformity (In accordance with European Parliament and Council Decision No: 768/2008/EC Annex III).

This conformity certificate approves the compliance of the product with the essential safety requirements of the following EC/EU Directives (Manufacturer, Product/Part No: as above).

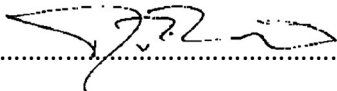
2001/95/EU	General Product Safety Directive.
2014/35/EU	Low Voltage Directive (LVD).
2014/30/EU	Electromagnetic Compatibility (EMC) Directive.
2011/65/EU	Restriction on Hazardous Substances Directive (RoHS).

European harmonised Standards used for conformity assessment and declaration:

EN 61010-1: 2010	Electrical Requirements for Laboratory Test & Measurement Equipment.
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Mark can be used only in the case of conformity assessment according to all relevant EC/EU Directives.

Dickon Knight (Director):  Date of Issue: 24th May 2023.

In the event of any correspondence concerning this product, please contact your supplying agent quoting the catalogue number and serial number shown on the apparatus rating label, together with the voltage and frequency of the mains electrical supply. This will help us to process your enquiry quickly. Any spare parts which may be required are supplied on the understanding that the replacement of those requiring the exposure of live electrical connections **will** be undertaken by an electrically qualified person.

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