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IPC Irwin Powerbase S5 PSU

Part Number IS5000

User Instructions



INTRODUCTION.

This heavy-duty power supply offers AC and DC (smoothed) output voltages, both outputs are selected by a single rotary switch and may be used simultaneously up to a combined output current of 5 Amps. In addition, the power supply incorporates both a safety cut-out in case of an overload, and a unique 'Voltage Locking System' which allows the output voltage (AC & DC) to be limited to either a max. or min. voltage, or a range of voltages or at one single voltage level.

DESCRIPTION.

The Powerbase S5 PSU offers 3, 6, 8, 11, 13 & 15VAC and 3, 7, 10, 13, 17, & 20VDC, to a maximum current of 5 Amps, the DC output is a fully rectified, smoothed (via a 4,700uF capacitor) voltage. Both outputs are unregulated which means the output voltage will vary in relation to the amount of current being drawn, for a precise voltage a voltmeter should be used. The front panel incorporates an illuminated on/off rocker mains switch, five 4mm output sockets for AC, DC and earth and a safety cut-out reset button. The Powerbase S5 PSU, as mentioned above, also incorporates a unique 'Voltage Locking System', this consists of 5 Allen key screw heads surrounding the voltage rotary switch, which are screwed out to prevent the dial from rotating.

INSTRUCTIONS.

To set the output voltage simply turn the rotary switch to the required voltage, the AC output is supplied via the two yellow 4mm sockets and the DC voltage via the Red and Black sockets. The output voltages are switched on using the mains switch on the front panel. We recommend that loads above 2A are removed before switching between the voltages. 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.

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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.

Operating the 'Voltage Locking System'.

The voltage locking system consists of 5 x Allen key screw heads surrounding the voltage rotary switch, these may be utilised in one of the three following ways.

- To set the maximum voltage, turn the switch to the required voltage and then unscrew the screw to the right of the switch pointer.
- To set the minimum voltage, turn the switch to the required minimum voltage and unscrew the screw to the left of the switch pointer.
- To lock within a range or particular voltage, select the range or voltage using the switch as guidance and then unscrew the two screws either side of the range or voltage.

SPECIFICATIONS.

Electrical Supply	= 220-240VAC, 50-60Hz
Fuse Ratings	= UK Mains Plug: 3A
Dimensions	= 285 x 185 x 175mm overall.
Mass	= 2.6kg
AC Voltage Range	= 3, 6, 8, 11, 13 & 15V (non-regulated).
DC Voltage Range	= 3, 7, 10, 13, 17 & 20V (full-wave rectified/smoothed, non-regulated).
Output Current	= 5 Amps Maximum (AC or DC or Combined).

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

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.

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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 S5 PSU (230V AC, 50Hz main voltage)/IS5000**

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).

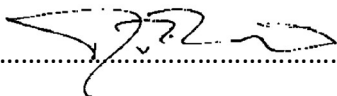
2001/95/EU	General Product Safety Directive.
2014/35/EU	Low Voltage Directive (LVD).
2014/30/EU	Electromagnetic Compatibility (EMC) Directive.
2011/65/EU	Restriction on Hazardous Substances Directive (RoHS).

European harmonised Standards used for conformity assessment and declaration:

EN 61010-1: 2010 **Electrical Requirements for Laboratory Test & Measurement Equipment.**



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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