



1315

0-25V/5A, AC/DC POWER SUPPLY

Instruction Manual

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POWER SUPPLY

Instruction Manual



GLOBAL SPECIALTIES

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SECTION - 1 GENERAL INFORMATION

DESCRIPTION :

This simple power source is designed specifically for use in educational institutions. It can be used to demonstrate the concept of alternating and non-alternating voltages. It can also be used for simple experiments using lamps, resistances, etc.

SPECIFICATIONS :

AC Voltage :

Output voltage
No Load :0V to 30V (nom)
Full Load :0V to 25V

Output current : 5A max
Output protection : 6A Circuit Breaker

DC Voltage No load :0V to 40V
Full Load :0V to 25V

Output voltage : 0V to 25V (nom)

Output current : 5A max

Output protection : 6A Circuit Breaker

General :

Input power : 115V AC, 60 Hz, single phase

Input Fuse : 2A / 250V Slow Blow

Dimensions : 225mm x 140mm x 225 mm.
(W x H x D) approx.

Weight : 5.0 Kg. approx.

**SECTION - 2
INSTALLATION**

PCB Components

Ref Designator	Value
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SWITCHES

SW1	ON / OFF SWITCH 10A, 125V, DPST, ILLUMINATED (T125 ARCOLECTRIC)
SW2	TOGGLE SWITCH 5A, 250V

GENERAL

AUTO TRANSFORMER	INPUT 2A / 115V, AC OUTPUT 5A / 30V, AC
CIRCUIT BREAKER	5A / 125V AC / DC
FUSE HOLDER	10A / 250V, FHB/02
INPUT FUSE	2A / 250V, SLOW BLOW

INITIAL INSPECTION :

As soon as the **1315** variable AC/DC source is unpacked, inspect for any damages that may have occurred during transit. Save all packing material until inspection is complete. If damage is found, notify the carriers immediately. Our authorised representative also should be notified.

PHYSICAL CHECK :

This check should confirm that there are no broken knobs. The cabinet and panel surfaces should be free of dents.

ELECTRICAL CHECK :

The **1315** variable AC/DC source is shipped ready for bench operation. It is necessary only to connect the instrument to a rated input voltage 115V AC / 60 Hz / 5A source of power and it is ready for operation.

INPUT POWER REQUIREMENTS :

The **1315** variable AC/DC source may be operated continuously from a 115V AC / 60 Hz power source.

REPACKING FOR SHIPMENT :

To ensure safe shipment of the **1315** variable AC/DC source, it is recommended that the package designed for the instrument be used. The original packing material is reusable.

**SECTION - 3
OPERATING INSTRUCTIONS**

a) 1315 as AC supply :

Set output voltage to 0V by turning the variable control to minimum position (Anti Clockwise).

Set Power ON switch to apply input power. Adjust the voltage control to obtain the required output voltage at the Blue Terminals. The variable control is a coarse control to adjust the output voltage with in 0-30V Connect the load at the AC output terminals. The output voltage will be 25V after connecting 5Amp Load. The total load current should not exceed 5 A for continuous operation.

In case of sustained overload, the overload trip operates to isolate the power supply from the load. When the overload is removed, the trip switch can be reset.

b) 1315 as DC supply :

Set output voltage to 0V by turning the variable control to minimum position (Anti Clockwise).

Set Power ON switch to apply input power. Adjust the voltage control to obtain the required output voltage at the Red & Black Terminals. The variable control is a coarse control to adjust the output voltage with in 0-40V. Connect the load at the DC output terminals. The output waveform is full-wave rectified and filtered DC output. The Output voltage will be 25V after connecting 5Amp Load. The total load current should not exceed 5 A for continuous operation.

In case of sustained overload, the overload trip operates to isolate the power supply from the load. When the overload is removed, the trip switch can be reset.

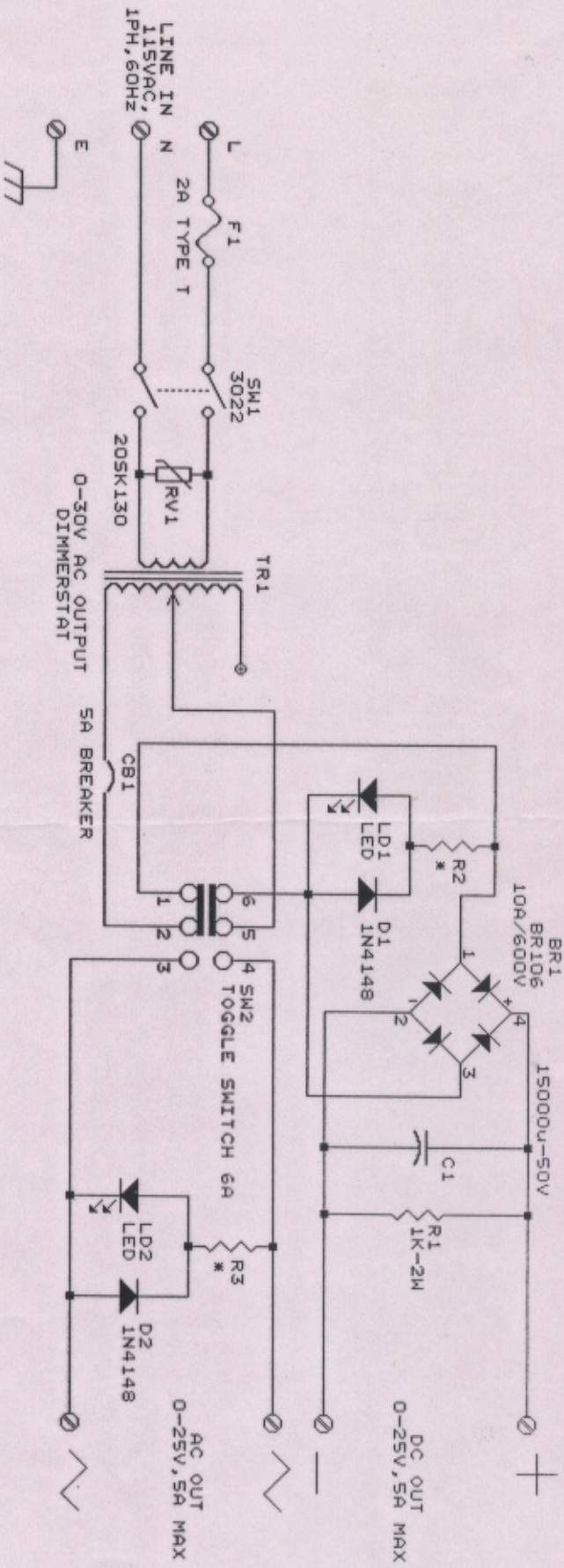
c) Indications :

Power ON will be indicated by Red Neon on Self Illuminated Power ON / OFF switch. Green LED will indicate the presence of AC output & Red LED will indicate the presence of DC output.

**SECTION - 4
PART LIST**

PCB Components

Ref Designator	Value
<u>RESISTORS</u>	
R1	500E, 2W, MOR
R2 & R3	Selectable Resistor
<u>CAPACITOR</u>	
	15000µF, 35V, EL, 85°
<u>LED's</u>	
DC OUTPUT ON	3mm, DEFUSED, RED
AC OUTPUT ON	3mm, DEFUSED, GREEN
<u>DIODES</u>	
D1	1N4148
D2	1N4148
<u>BRIDGE RECTIFIER</u>	
BR1	10A / 400V, MIC
<u>TERMINALS</u>	
AC OUTPUT	BT15 BUE x 2
DC OUTPUT	BT15 RED BT15 BLACK
<u>VARISTOR</u>	
20SK 130	130V AC



WIRING DIAGRAM OF AC/DC POWER SUPPLY 1315

GLOBAL	
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