

POWER SUPPLY

SINGLE-OUTPUT

LODESTAR

PS-303

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1. INTRODUCTION

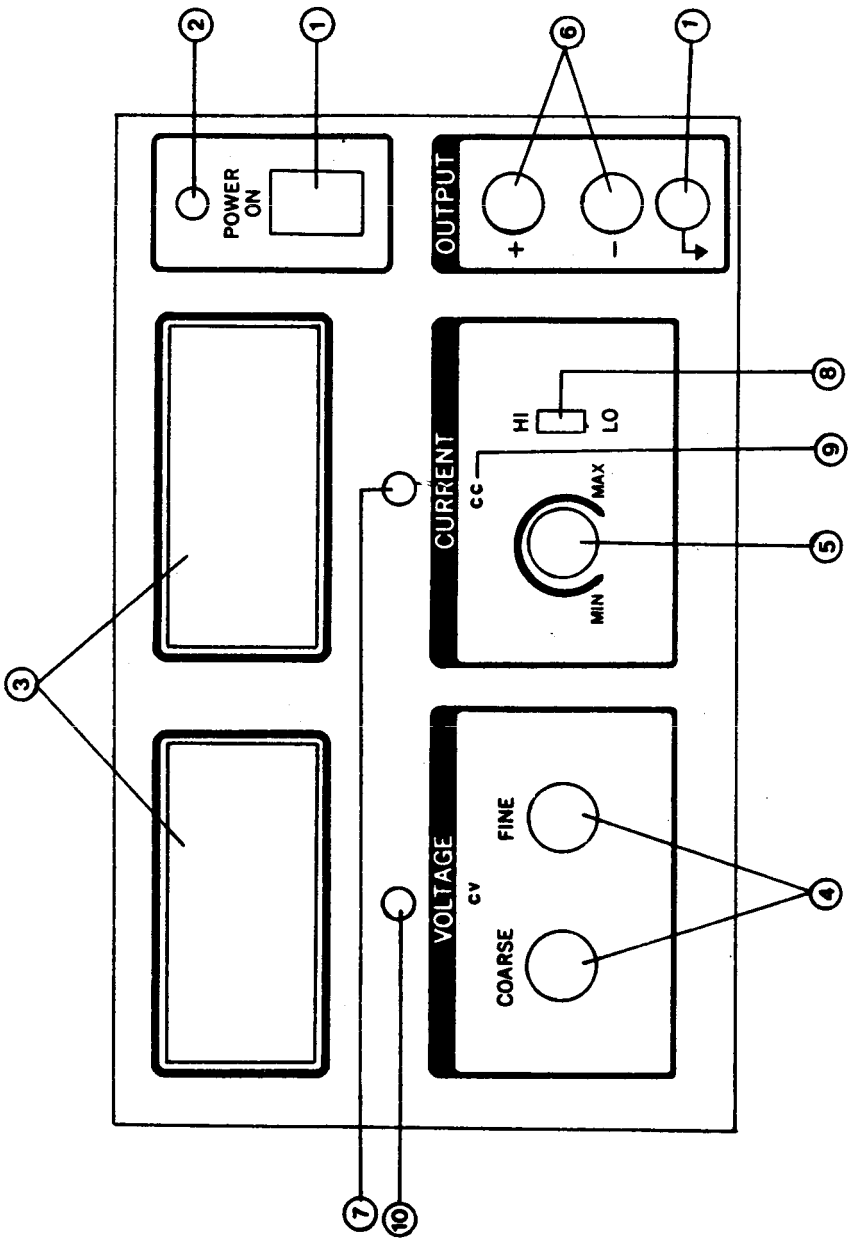
The unit is a bench top single output power supply. The power supply has two meters for monitoring output voltage and current.

The unit will find wide application in schools, laboratories, and commercial engineering and testing departments, as well as with the advanced hobbieist.

2. FRONT PANEL DESCRIPTION

The following is the explanation of the function of each of the front panel controls and connectors.

- (1) POWER ON-This is the main power switch.
- (2) POWER ON LED-This LED indicates that the power is on.
- (3) VOLTAGE/CURRENT METERS-These two meters indicate the output voltage and current as measured at the output terminals.



- (4) COARSE/FINE VOLTAGE ADJUST-These two controls adjust the output voltage of the supply.
- (5) CURRENT ADJUST-This control adjusts the maximum output current that the supply will put out.
- (6) OUTPUT TERMINALS-There are three terminals. They represent positive, negative and ground.
- (7) METER ZERO-Each meter has a mechanical screw adjustment for setting the zero point.
- (8) HI/LO SWITCH:.Put on "HI" position means that the needle indicates the upside high scale of AMPERES meter and on "LO" position means to indicate the low scale of meter.
- (9) CC LAMP - When the unit is in overload or short, the light will be "ON". It means that the unit is overload and the output D.C. voltage will be down until output voltage is cut to OVDC.

(10)CV LAMP - When the unit is in normal working, the lamp will be "ON". But, when the unit is over load or short, the lamp will be light off.

(11)GROUND TERMINAL

3. OPERATING INSTRUCTIONS

WARNING-Before applying power supply, make sure that the AC input voltage setting is correctly set for your available power.

(1) Connect the instrument to an AC power source using the line cord provided and turn the POWER ON switch on. For maximum stability, allow the instrument to warm up for at least 20 minutes.

(2) Set the voltage and current adjustment knobs as you desire.

4. OPERATING CAUTIONS

Please follow the following cautions when using your power supply to prevent damage to the unit.

- (1) Verify that the AC voltage setting is the same as your available Power BEFORE you apply power the instrument.
- (2) Do not connect a voltage that is greater than the current output voltage to the terminals of the instrument.
- (3) Do not parallel the output of two or more.

5. Specifications

- (1) Output voltage: 0-30 VDC, continuously variable with coarse and fine controls.
- (2) Output current: 0 to 3A(0 to 5A) continuous; automatic limiting above 3A.

- (3) Current limiting: 0 to 3A(0 to 5A); continuously variable.
- (4) Load regulation: $\pm (0.25\% + 3\text{mV})$.
(1% to 100% of rated load)
- (5) Line regulation: $\pm (0.025\% + 2\text{mV})$.
($\pm 10\%$ input variation)
- (6) Ripple and noise: Less than 5mV peak-to-peak; 0.5mV rms
(to 10 KHz) typical.
- (7) Output impedance: Less than 0.2Ω typical.
(to 10 KHz)
- (8) Meter ranges: Voltage: 0 to 30V.
Current: 0 to 600mA, 0 to 3A.
- (9) Meter accuracy: 2.5% of full scale.
- (10) Protection features: Protected against: Short circuit.

(11) Power Requirements:

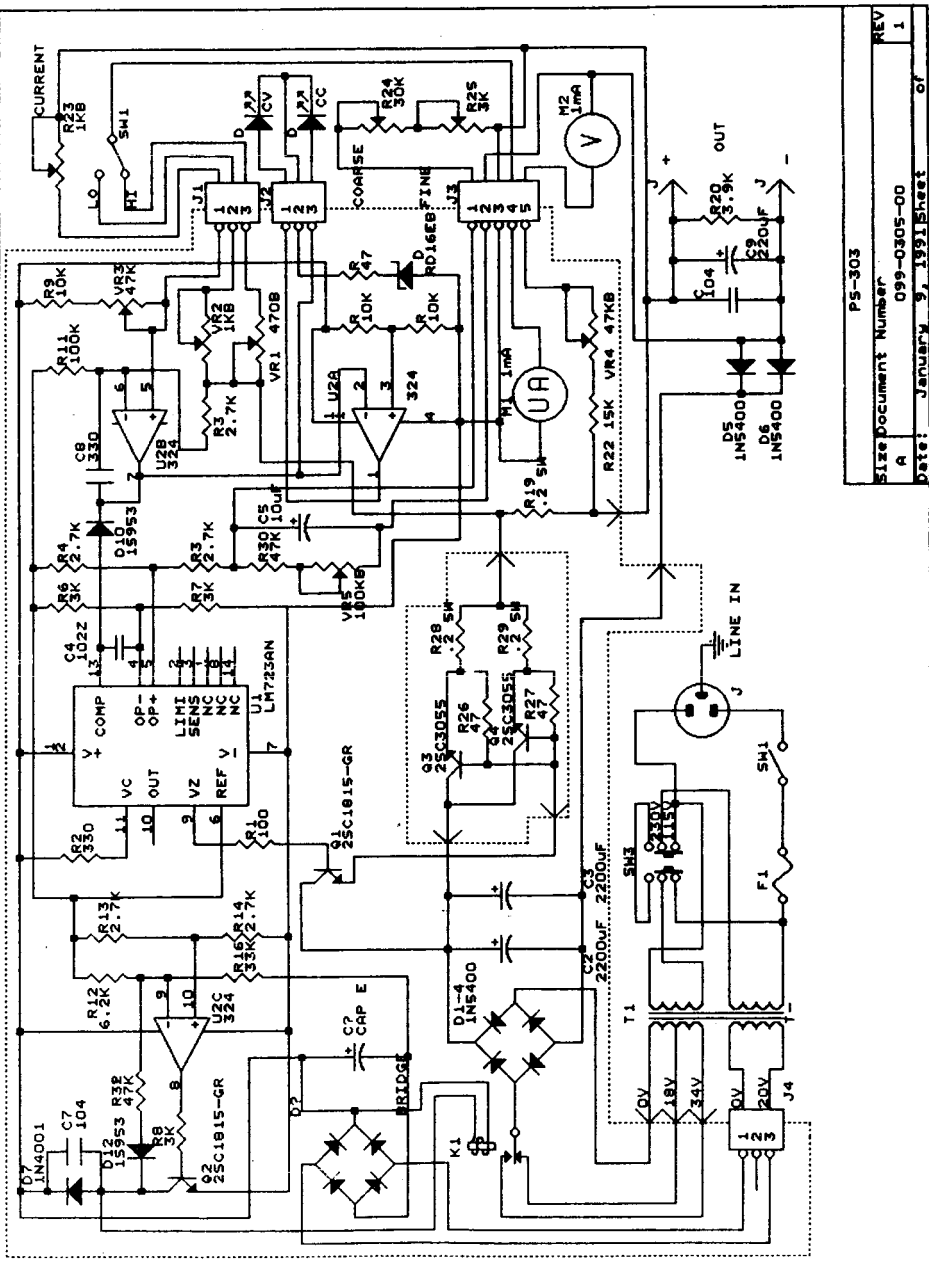
120 VAC/240 VAC, $\pm 10\%$; 50/60 Hz, 180

watts at full load.

(12) Dimensions:

9 in. W x 11 in. D x 6-1/2 in. H

(23cm x 28cm x 17cm).



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