

Circuit Specialists, Inc

Single Output Adjustable DC Bench Power Supplies with Large LED Displays

[CSI12005S.....0-120VDC/ 0-5A Regulated Power Supply](#)

[CSI20002S.....0-200VDC/ 0-2A Regulated Power Supply](#)

[CSI5030S.....0-50VDC/0-30A Regulated Power Supply](#)

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INTRODUCTION:

CSI12005S, CSI20002S and CSI5030S series of Adjustable DC Voltage and Current Regulated Power Supplies are high precision DC Power Supplies with continuously adjustable voltage and current outputs. They feature automatic switching between voltage regulation and current regulation. The output voltage (CV) is adjustable starting from zero volts and can be set arbitrarily through the rated range. When it is in the (CC) mode, the current regulation is continuously adjustable through the rated range.

These CSI series Power Supplies have large LED output voltage and current displays.

Model	CSI12005S	CSI20002S	CSI5030S
Rated Voltage	0—120V	0—200V	0—50V
Rated Current	0—5A	0—2A	0—30A

1. General Specifications

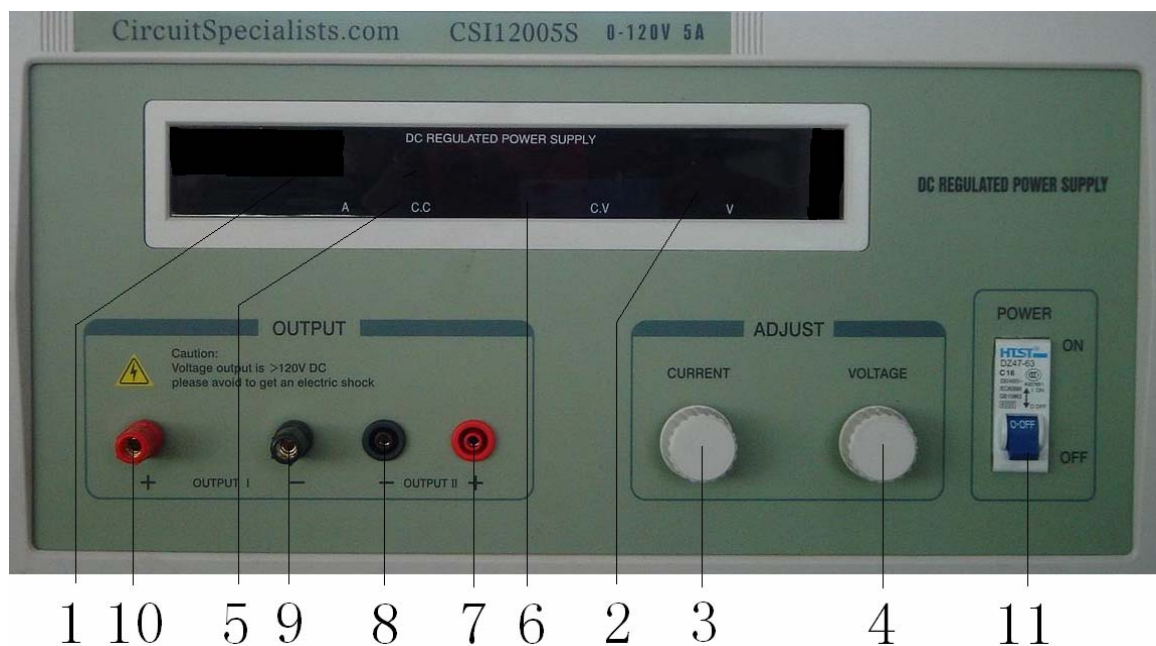
- 1.1 Input Voltage 110V $\pm 10\%$ 50Hz—60Hz
- 1.2 Output Voltage: see the form above
- 1.3 Output Current: see the form above
- 1.4 Source Regulation: $1 \times 10^{-3} + 5\text{mV}$
- 1.5 Load Regulation: $1 \times 10^{-3} + 5\text{mV}$
- 1.6 Ripple&Noise: $\leq 10\text{mVrms}$
- 1.7 Protection: Current-limiter Protection
- 1.8 Voltage Display Accuracy: 1% +3d
- 1.9 Current Display Accuracy: 2% +3d
- 1.10 Working Environment: 0—+40°C Relative Humidity:
<90%
- 1.11 All units are heat sink and fan cooled.

NOTE: CSI5030 can not work for long hours at full load due to excessive heat build up. Below are estimated run times. Actual performance is affected by environmental factors including ventilation in area of use.

50V – 30A = 1 Hour at 1500Watts (FULL CAPACITY, Uninterrupted)

50V – 25A = 2 Hours at 1250Watts Uninterrupted

50V – 20A = 6 Hours at 1000Watts Uninterrupted



2: OPERATION

2.1 The locations and functions of the knobs and switches on the panel

- (1) Current Display: to display the output current.
- (2) Voltage Display: to display the output voltage.
- (3) Current Regulation Adjustment Knob and to set the current-limit protection point.
- (4) Voltage Regulation Adjustment Knob: to adjust the output voltage value.
- (5) CC : Constant Current state LED.
- (6) CV: Constant Voltage state LED.
- (7) The positive output terminal. To be connected with the positive end of the load----Normally for test, examine and repair, or to be

- connected with an external high precision measuring instrument.
- (8) The negative terminal of output, to be connected with the negative end of the load----Normally for test, examine and repair, or to be connected with an external high precision measuring instrument.
 - (9) The positive terminal of output, to be connected with the positive end of the load.
 - (10) The negative terminal of output, to be connected with the negative end of the load.
 - (11) Power Switch. Flip up to turn the power “ON”; flip down to turn the power “OFF”.

2.2 Load Connection

Connect the positive end of the load to the positive terminal (#7) or (#10) and the negative end of the load to the negative terminal (#9). When the power is turned on, the LED displays the output current value and displays the output voltage value. If the current is past the rated range and the CC (#5) indicator is lit, then there is an overload or short-circuit. Please adjust the load to have the unit recover from this state.

2.3 To use as a Constant Current Power Source (CC)

After turning on the power, turn the Voltage Regulation Adjustment Knob (#4) clockwise to maximum, and turn the Current Regulation Adjustment Knob (#3) counterclockwise to minimum, then connect the load and turn the Current Regulation Adjustment Knob (#3) clockwise until the output current gets to the desired current setting.

2.4 To use the unit as a Voltage Power Source (CV)

Turn the Current Regulation Adjustment Knob (#3) clockwise to the maximum. The current-limit protection point can be set arbitrarily at the same time and the method is as follows: turn on the power supply, connect the unit with an appropriate load of variable resistance and adjust the resistance to make the output current equal to the value at the current-limit protection point, then

turn the Current Regulation Adjustment Knob (#3) counterclockwise to make the (CC) indicator come on, the current-limit protection point is set at this point and can be decreased or increased with Knob (#3).

3. Precautions:

- 3.1 After every use, put the unit in a place where it is dry, ventilation is good and where it will stay clean. If this unit is not in use for a long periods of time, please remove the plug before storing it.
- 3.2 These units should only be repaired by qualified repair technicians, as some components retain an electrical charge and can cause serious harm or even cause a fatality if handled incorrectly.
- 3.3 When this power supply is used with Wireless Power Emission Equipment, the displayed voltage and current may not be stable. (The displays may become disrupted by the high output radio frequencies) Please use a low-resistance analog meter to choose more accurate settings under these circumstances.

Warranty Statement:

Circuit Specialists, Inc. warrants this product to be free from defects caused by workmanship or production error for a period of 12 months after the initial purchase date. Circuit Specialists Inc. will, at its' option, repair or replace any defective unit with a working unit after the defective product has been returned, freight prepaid to Circuit Specialists, Inc. Should you have a defect that is covered by this limited warranty, please contact Circuit Specialists, Inc. (1-800-528-1417/ 480-464-2485) for an RMA number prior to returning the unit. Products that are damaged from misuse are not covered by this limited warranty.