

INSTRUCTIONS OF USING DC POWER SUPPLY SPS-1230

I. PANEL CONTROL AND INDICATORS

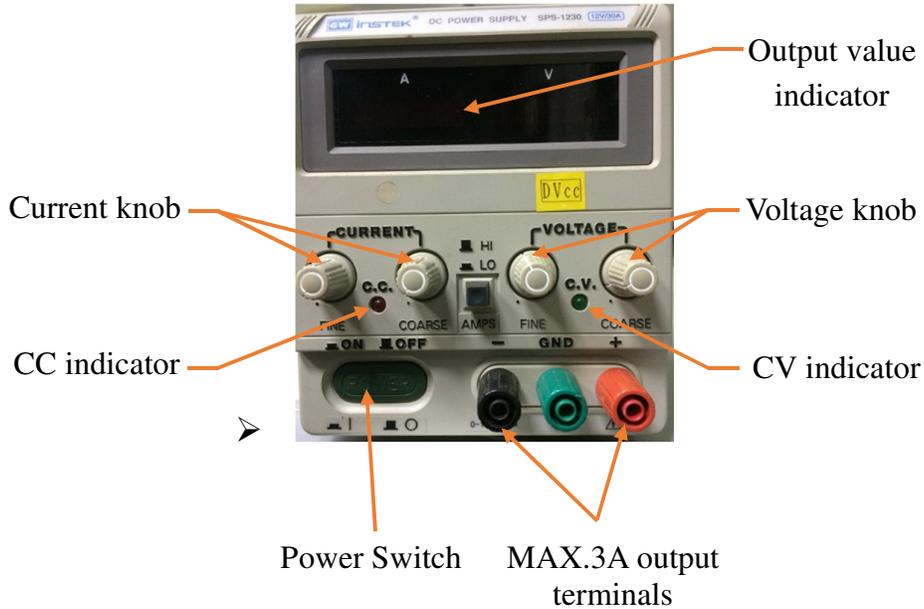


Fig. 1 Front panel

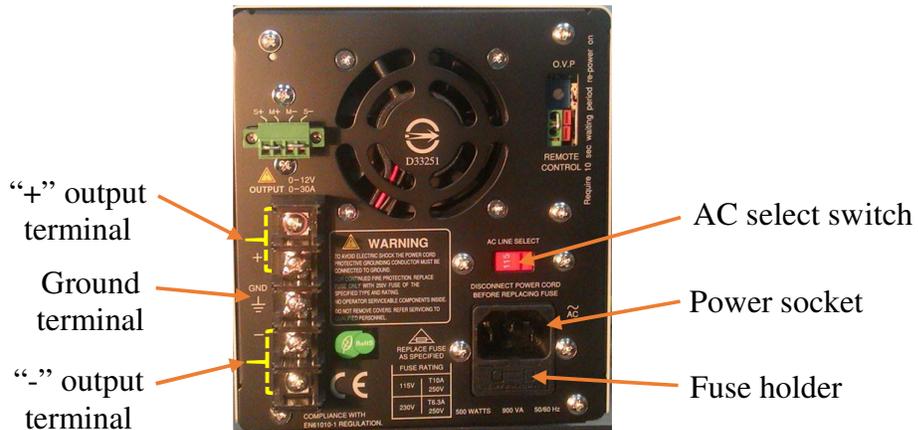


Fig. 2 Rear panel

II. PRECAUTIONS BEFORE OPERATION

- Before connecting the power plug to an AC line outlet, make sure the **voltage selector** of the rear panel is set to the *correct position* and the **proper fuse** installed corresponding to the line voltage.
- AC input should be within the range of line voltage $\pm 15\%$, **50/60Hz**
- If the fuse blown, the CV or CC indicators will not light and the power supply will not operate. The fuse **SHOULD NOT** normally blow unless a problem has developed in the unit. Try to determine and correct cause of the blown fuse, the replace only with a fuse of the correct rating and type.
- The normal ambient temperature range of this instrument is from **0°** to **40°C**.
- Do not use the instrument in a place where **strong magnetic or electric field** exists as it may disturb the measurement.
- To avoid electrical shock, the power cord protective grounding conductor must be connect to the ground.
- The machine itself is a heat source, please **don't pile up** the machine while operation. Keep the machine from other heating source at least for **10cm**. In addition, the heat sink located at rear of the power supply must have **sufficient space** for radiation.

III. OPERATIONAL STEPS

Step 1: Set Power switch to “**OFF**” position.

Step 2: Make sure that line voltage is **correct** for the input power voltage.

Step 3: Plug power cord into the AC power outlet.

Step 4: Set Power switch to “**ON**” position.

Step 5: Adjust “Voltage” and “Current” control to the desired output voltage and current (see **section IV**).

Step 6: Connect the external load to the output binding posts. Make sure both “+” and “-” terminals are connected correctly.

IV. STEPS FOR SETTING CURRENT LIMIT

- (1) Determine the maximum safe current for the device to be powered.
- (2) Temporarily short the (+) and (-) terminals of the power supply together with the test lead (*For safety assurance, please select the adequate output test lead according to Table 1*).
- (3) Rotate the COARSE VOLTAGE control away from zero sufficiently to have the CC indicator lightened.
- (4) Adjust the CURRENT control for the desired current limit. Read the current value on the Ammeter.
- (5) The current limit (overload protection) has now been preset. Do not change the CURRENT control setting after this step.
- (6) Remove the short between the (+) and (-) terminals. The power supply returns to the constant voltage mode and is ready to use.

Table 1. Output Test Lead selection

Conductor			Maximum Conductive Resistor (Ω/km)	Permissible Current A(amp)
Wire No. AWG	Cross section Area (mm^2)	Outer Diameter (mm)		
24	0.22	0.64	88.6	7.64
22	0.34	0.78	62.5	10.0
20	0.53	0.95	39.5	13.1
18	0.87	1.21	24.4	17.2
16	1.32	1.53	15.6	22.6
14	2.08	2.03	9.90	30.4
12	3.29	2.35	6.24	40.6
10	5.23	3.00	3.90	55.3