

Warning: Do not connect any load to the power supply before it's turned on. Likewise, make sure to disconnect the load before shutting down the power supply. Damages to the power supply can happen if you do not follow this. Such damages are not under warranty.

Warning: If you are running inductive load like magnetic coils, DC motors, stepper motors, etc., make sure to change the voltage/current slowly, and NEVER turn the power supply on or off with a inductive load connected!

I Summary

This serial single output switch power supply is a kind of DC regulated power supply.

It has high efficiency, stronger load ability, and long continuous working period characteristics. Also it has perfect over voltage, over temperature, overload protection functions and so on. It can act as constant voltage as well as constant current DC power supply. This series of power supplies are first choices for scientific and research institutions, colleges, factories units ect. See the models from the table1.

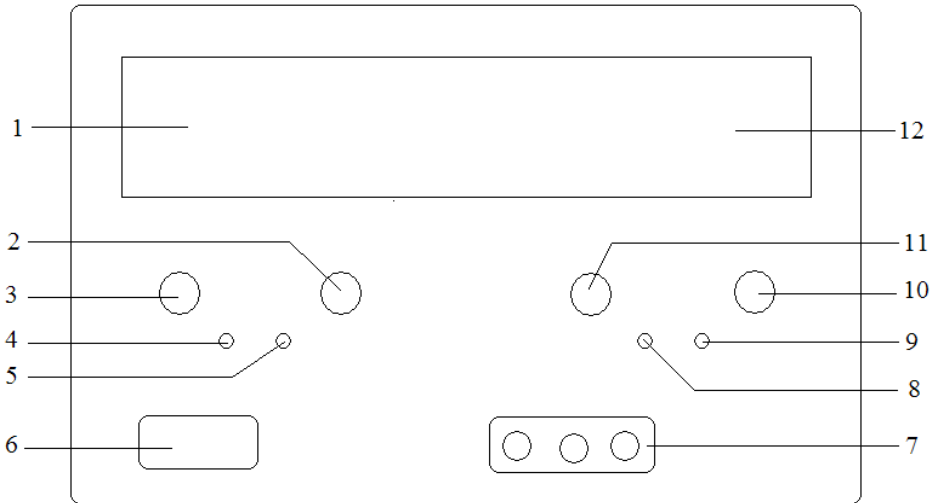
Model:

Model	Output Voltage	Output Current	Display	Display accuracy
LW1550KD	0-15V	0-50A	3LED display	$\pm 1\% \pm 1$ digit
LW1560KD	0-15V	0-60A	3LED display	$\pm 1\% \pm 1$ digit
LW3050KD	0-30V	0-50A	3LED display	$\pm 1\% \pm 1$ digit
LW3060KD	0-30V	0-60A	3LED display	$\pm 1\% \pm 1$ digit
LW3080KD	0-30V	0-80A	3LED display	$\pm 1\% \pm 1$ digit
LW30100KD	0-30V	0-100A	3LED display	$\pm 1\% \pm 1$ digit
LW6020KD	0-60V	0-20A	3LED display	$\pm 1\% \pm 1$ digit
LW6030KD	0-60V	0-30A	3LED display	$\pm 1\% \pm 1$ digit

(Table 1)

II Panel's characteristics and technical parameters

2.1 Panel's characteristics



- (1) Digital ammeter: display the output current value
- (2) Over voltage protection setting knob: regulate the value of the over voltage protection.
- (3) Current regulation setting knob: regulate the current value of the current regulation.
- (4) Current regulation indicator light: When the power supply is under the current regulation, the indicator light is on.
- (5) Over voltage protection indicator light: When the power supply is under the over voltage protection, the indicator light is on.
- (6) Power switch: When the power supply is placed “ON” (that is when the power supply switch is lowered down), the machine is “ON”, at this moment the indicator is on. Conversely, the machine is off (that is the switch is up)
- (7) Front terminal output of the power supply: from left to right, the order is output negative terminal, ground terminal and positive terminal. In order to reduce the ripple, usually, the output post head “-“reliably connects with post head “GND” (**attention: the maximum output current of the front output terminal is 10A, if the output current is more than 10A, please choose the back output terminal**).
- (8) Over temperature: When the power supply is under the over temperature protection, the indicator light is on.
- (9) Voltage regulation indicator light: When the power supply is under the voltage regulation, the indicator light is on.
- (10) Voltage coarse regulation knob: Coarsely regulate the output voltage.
- (11) Voltage fine regulation knob: Finely regulate the output voltage.

(12) Digital voltmeter: Display the output voltage value.

2.2 Rated operating condition

- (1) Input voltage: AC220V \pm 10% 50Hz
- (2) Working conditions: -10⁰C -40⁰C relative humidity<90%
- (3) Storage conditions: -20⁰C-80⁰C relative humidity<80%

2.3 technical parameters

- (1) Voltage stabilization: \leq 0.2%
- (2) Current stabilization: \leq 0.5%
- (3) Load stabilization: \leq 0.3%
- (4) Ripples and noises: \leq 1 %(RMS)

III The method for use

1. Determine the correct input voltage, 220V \pm 10% 50Hz
2. Place the power switch in “ON” position, the indicator light is on.
3. Constant voltage setting: the knobs (2) and (3) should be clockwise regulated to the maximum. Regulate the coarse and fine voltage regulation knobs (10) and (11) to set the necessary voltage value, and then connect the load to the “+” and “-” output terminal. At this moment the power supply is working under the condition of constant voltage, the output voltage remains the same, while the output current changes with the load. When used in places with high demand, make sure one of the output terminal “+” or “-” must reliably connect with post head “GND” so as to reduce output ripple voltage.

4. Constant current setting: Firstly, regulate the voltage to any value between 3-10V, and regulate the knob (3) to the minimum. (0A), and then use a lead to make positive and negative polarities shorted. Regulate the Current regulation setting knob (3) to the necessary current value. Remove the short lead, and then regulate the voltage to the necessary value, connect the load, then you can start your work. At this moment the power supply is under the constant current. That is the current remains the same, while the voltage changes with the load. (There will be slight sounds when positive and negative polarities are shorted. That is normal phenomenon)

5. Over voltage protection setting: Firstly regulate the over voltage protection setting knob (2) to the maximum, and then start the power supply, regulate the voltage to the necessary value, counterclockwise regulate over voltage protection setting knob until the Over voltage protection indicator light (5) is on and have no voltage output. Turn off the power supply, regulate the voltage to 0V, and restart the power supply, regulate the voltage to the necessary value. Now you can start you task. (The over voltage protection value should be higher than the necessary voltage value. If not, the power supply can not be started. Restart the power supply until the over voltage protection indicator light (5) is off.)

IV Matters need attention

1. Input voltage: Confirm the input voltage is AC220V \pm 10% 50Hz.if the input voltage is wrong, the power supply can not work normally, and even it will lead to serious result.

2. Working condition: For the purpose of heat dissipation, there should be enough space around the power supply. The two sides and back of the power supply should have more than 10cm space. This kind of power supply uses intelligent fan controlled by temperature to cool. When inside temperature of the power supply is no less than 45°C , the fan start to work, while the temperature is less than 45°C , the fan stop working.

3. The protective ground terminal of the tree-core power cord should be reliably connected with the ground to ensure safety in use and reduce the ripple.

4. **Do not start the power supply with load, otherwise it easily damage the power supply and load. When the load current is more than 10A, please choose the back output terminal**, tighten the output terminal to avoid damaging the terminal which caused by large contact resistance. Please regularly check the connecting terminal whether it is loose or not.

5. Over temperature protection: The power supply has over temperature protection function. When inside temperature is higher than protection value, the power supply will stop working. After the inside temperature is lower than protection value, the power supply will come to work again. Do not use the power supply in the condition that the temperature is higher than 40°C . There should be enough space for heat dissipation.

6. Example of over voltage protection: Take required voltage less than 12V for example. Firstly regulate the current regulation setting knob (3) and over voltage protection setting knob (2) to the maximum, then turn on the power supply. Regulate the voltage coarse and fine knobs to make the output voltage

12V, counterclockwise regulate the over voltage protection setting knob (2) until the indicator light (5) is on. At this moment, the power supply has no voltage output. Regulate the voltage less than 12V (setting value), turn off the power supply. The indicator light will be off after about 10 seconds. Restart the power supply, regulate the voltage to the necessary value, then you can start your work. (Attention: Restart the power supply after the indicator light off and output voltage less than setting value).

7. This serial is a kind of switch power supply. It has the function of about 2 seconds with time delay start-up (turn on the power supply, after about 2 seconds, the indicator light is on and the LED has display). Also it has the function of about 1-5 seconds with time delay start-down.

V Maintenance

1. If the protective tube burned out, the power supply will stop working. Please replace it with equivalent protective tube. The crisper should not be opened unless something goes wrong.
2. The power supply is precisely regulated before it goes out. Please do not open the power supply unless you are a professional. If there is something wrong, please contact with dealer. Do not repair the power supply by yourself as there is high voltage circuit in the power supply.

VI attachment

User manual	1
Power cord	1

Pay attention: as the rated power is high, it should use Air-switch but not plug in order to keep the power supply from damage.

On the cable of the power supply, there have used sticks to show which one is live wire, which wire is nature wire and the ground wire. Connect the power line with air switch in drive-by-wire chassis on the wall.

Green line is Ground wire

Red line is Live wire

Blue line is Nature wire