DC Power Supply

MCH-K1504D

150V/4A Adjustable CV/CC DC Switching Power Supply

USER'S MANUAL

MCH Instruments Co., Ltd.

MCH-K15040D is a switching type DC power supply with max. 600W output, single phase 220V AC input, 0~100% of full range continuously adjustable output of constant voltage or constant current. The characteristic of switching mode power supply is providing compact size, lightweight, high efficiency and full isolation.

Main features

- This power supply is widely used in radio & television broadcasting, communications, electric power, scientific research, electroplating, water treatment, battery charging, aging of product and so on.
- Well designed switching mode power supply creates little ripple close to that of linear type power supply with providing higher efficiency, less size and weight.
- Using industrial level components, optimized circuit design and strictly controlled production assure high stability and reliability of the products.
- Wide input voltage range.
- Constant Voltage output from 0V to nominal value continuously adjustable.
- Constant Current output from 0A to nominal value continuously adjustable.
- When output voltage is low, a lower input voltage is allowed.
- Sampling directly at the point of output, assures high accuracy and reliability.
- Several power supplies can simply be connected in parallel to provide larger current, no special treatment is needed on the currents.

- Input over-current protection、overvoltage protection、under-voltage protection; Output short-circuit、over-current、over-voltage protection; Whole machine overheat protection.
- Intelligent cooling fan
- Inner EMI filter.
- Main technical specifications:
- Environmental condition
- Working temperature:(-20～50)℃;
- Storage temperature:(-40～70)℃;
- Relative Humidity: 90%(40±2℃);
- Atmospheric pressure: (70～106)kPa;
- Dimension: 330mm(L) X 160mm(H) X 200mm(W)
- Input voltage: Single-phase AC220V±20% 50～60Hz
- Compatible direct current input: DC240V～360V
- Constant Voltage output: 0～150V
- Constant Current output: 0～4A
- Efficiency: ≥86%
- Load regulation: ≤0.5%
- Line voltage regulation: ≤0.5%
- Ripple: ≤0.5%Vout(p-p)
- 100Hz ripple: ≤300mV
- Insulation resistance: ≥20MΩ
- Voltage withstanding between input port and chassis: ≥AC1500V
- Voltage withstanding between input and Output port: ≥AC1500V
- MTBF ≥50000h
- Maximum output power 600W
- Delay Start up: 2-4S

- Delay shut down: 2-5S
- Total weight: 3.5g
- Overall overheat protection threshold: 75-85℃
- Voltage display precision ≤1%
- Current display precision ≤1%
- Output voltage temperature drift ≤1%

Instruction

- When unpacking, please check if there are a manual, a guarantee card come along with the product.
- Before power it on, check if there is any loose part or damage due to transportation. Treat it properly if there's any.
- Connecting: Connect cables correctly and tight referring the symbols on rear panel. Make sure line voltage is suitable for this instrument.
- Power it on without load. Adjust constant voltage to desired value with voltage knob. Turn it CW for higher voltage, turn it CCW for lower.
- Adjusting constant current value: Connect cables to output terminals on rear panel(ensure the wire has enough cross section). Connect load and Adjust constant current to desired value with current knob.(Notice: The resistance of the load shall be small enough that the power supply can get to constant current state.) Turn the knob CW for larger current, turn it CCW for smaller.
- To use the power supply as a Constant Voltage Source, turn current knob to its max position. Adjust voltage knob to obtain desired value. At this moment, output

current varies along with load changing with steady voltage. To use it as a Constant Current Source, turn voltage knob to its max position. Adjust current knob to obtain desired value. At this moment, output voltage varies along with load changing with steady current.

- Cooling fan is temperature-controlled, it start to rotate when inner temperature exceed starting point. Never block the ventilation holes.
- If inner temperature reach shut-down limit, the power supply will automatically power off to protect its components and automatically power on after some time when the temperature drops.
- When power supply is operating, dust, acid and corrosive air in air, there should not exceed their normal level. No heavy shock, shaking, rain and sun ray should apply to it directly.
- Regular dust removal may significantly extend the life and reliability of the power supply. (use dry compress air, be careful of the high voltage inside, avoid opening the cover)
- The power supply shall be place in a dry, well ventilated room. If it's rarely used, power it on at least half hour every 6 month.
- Warning: Only after the power supply is checked working normally, then it can be connect to load device.
- Trouble handling: If the power supply is seen working abnormal when it is turn on, power it off immediately. Check carefully on wiring, position of knobs and switches etc. If no intuitional problem is found. Please contact the factory or your agent. Repairing by user is not advised.

Warranty issues

- The product has one year warranty, maintenance of life.
- If there are problems when using the products, please check the product follow the manual, if the problem still can not be settled , Please contact us as soon as possible
- If the following situations arise when using the product, the company does not undertake warranty obligations:
- Damage Caused by violating manual and resulting defects;
- Damage Caused by using product beyond the allowing environment;
- Damage caused by modify or repair;
- Damage caused by external force;
- Damage caused by natural disasters and force majeure.

Note: the Max. power is ⩾90% when continuously working.