

# multicomp<sup>PRO</sup>

## Digital-Control and Programmable Twin DC Power Supply

Models: 72-10495, 72-10500 and 72-10505



| Line Regulation                   |                            |                            |                            |
|-----------------------------------|----------------------------|----------------------------|----------------------------|
| Voltage                           | ≤0.01%+3mV                 | ≤0.01%+3mV                 | ≤0.01%+3mV                 |
| Current                           | ≤0.1%+3mA                  | ≤0.1%+3mA                  | ≤0.1%+3mA                  |
| Setup Resolution                  |                            |                            |                            |
| Voltage                           | 10mV                       | 10mV                       | 10mV                       |
| Current                           | 1mA                        | 1mA                        | 1mA                        |
| Setup Accuracy (25°C to -5°C)     |                            |                            |                            |
| Voltage                           | ≤0.5%+20mV                 | ≤0.5%+20mV                 | ≤0.5%+30mV                 |
| Current                           | ≤0.5%+10mA                 | ≤0.5%+5mA                  | ≤0.5%+5mA                  |
| Ripple (20-20m)                   |                            |                            |                            |
| Voltage                           | ≤2mVrms                    | ≤1mVrms                    | ≤1mVrms                    |
| Current                           | ≤3mA <sub>rms</sub>        | ≤3mA <sub>rms</sub>        | ≤3mA <sub>rms</sub>        |
| Temperature Coefficient           |                            |                            |                            |
| Voltage                           | ≤150ppm                    | ≤150ppm                    | ≤150ppm                    |
| Current                           | ≤150ppm                    | ≤150ppm                    | ≤150ppm                    |
| Read Back Accuracy                |                            |                            |                            |
| Voltage                           | 10mV                       | 10mV                       | 10mV                       |
| Current                           | 1mA                        | 1mA                        | 1mA                        |
| Read Back Temperature Coefficient |                            |                            |                            |
| Voltage                           | ≤150ppm                    | ≤150ppm                    | ≤150ppm                    |
| Current                           | ≤150ppm                    | ≤150ppm                    | ≤150ppm                    |
| Reaction Time                     |                            |                            |                            |
| Voltage Rise                      | ≤100mS                     | ≤100mS                     | ≤100mS                     |
| Voltage Drop                      | ≤100mS<br>(10% rated load) | ≤100mS<br>(10% rated load) | ≤100mS<br>(10% rated load) |

**Interface:** Interfaces (for programmable models only): RS232, USB

**Accessories:** User manual and power cord

| Model    | Dimensions    | Weight |
|----------|---------------|--------|
| 72-10495 | 220x156x260mm | 9.3kg  |
| 72-10500 | 220x156x260mm | 6.6kg  |
| 72-10505 | 220x156x260mm | 6.8kg  |



### INFORMATION ON WASTE DISPOSAL FOR CONSUMERS OF ELECTRICAL & ELECTRONIC EQUIPMENT.

When this product has reached the end of its life it must be treated as Waste Electrical & Electronic Equipment (WEEE). Any WEEE marked products must not be mixed with general household waste, but kept separate for the treatment, recovery and recycling of the materials used. Contact your local authority for details of recycling schemes in your area.

Made in China.

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## IMPORTANT SAFETY INFORMATION

Please read these instructions carefully before use and retain for future reference.

The following safety symbols may appear in this manual or on the series:

| Symbol  | Meaning                 |
|---|-------------------------|
|  | Warning                 |
|  | Danger - High Voltage   |
|  | Earth (Ground) terminal |

- Do not block or obstruct the opening to the cooling fan vent.
- Avoid severe impacts or rough handling as it could lead to damage.
- Do not discharge static electricity.
- Do not disassemble unless you are qualified as service personnel.

## AC INPUT

- AC input voltage: 110V / 120V / 220V / 230V, 50/60Hz.
- Connect the protective grounding conductor of the AC power cord to an earth ground, in order to avoid electrical shock.

## OPERATION ENVIRONMENT

|                          |  |
|--------------------------|--|
| <b>Location</b>          | Indoor, no direct sunlight, dust free, almost non-conductive pollution |
| <b>Relative Humidity</b> | <80%   |
| <b>Altitude</b>          | <2000m   |
| <b>Temperature</b>       | 0-40°C   |

## STORAGE ENVIRONMENT

|                          |            |
|--------------------------|------------|
| <b>Location</b>          | Indoor     |
| <b>Relative Humidity</b> | <70%       |
| <b>Temperature</b>       | -10 - 70°C |

## FUSE



| Model    | 220V / 230V       |
|----------|-------------------|
| 72-10495 | T5A/250V (20x5mm) |
| 72-10500 | T4A/250V (20x5mm) |
| 72-10505 | T4A/250V (20x5mm) |

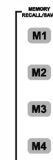
- Avoid the risk of fire by only replacing the fuse with the specified type and rating.
- Disconnect the power before replacing the fuse.
- Make sure the cause of the fuse blowing is fixed before replacing the fuse.

## SAVE SETUP

|                        |  |
|------------------------|--|
| <b>Background</b>      | The front panel settings can be stored into one of the four internal memories.   |
| <b>Contents</b>        | <p>The following list shows the setup contents:</p> <ul style="list-style-type: none"> <li>• Fine/coarse knob editing mode</li> <li>• Beep on/off</li> <li>• Output voltage/current level</li> </ul> <p>The following settings are always saved as "off":</p> <ul style="list-style-type: none"> <li>• Output on/off</li> <li>• Front panel lock on/off</li> </ul> |
| <b>Panel Operation</b> | Press one of the four buttons (M1, M2, M3, M4) and the LED light turns on accordingly. After adjusting the value, it is automatically saved, once the LED light stops blinking.  |

## RECALL SETUP

The front panel settings can be recalled from one of the four internal memories.



- M1
- M2
- M3
- M4
- M5

Press buttons M1 to M4.

For example, the memory of the panel setting is recalled in M1. After you recall M4, rotate the shuttle knob to recall M5.

If the memory indicator is lit on the panel of lights, then the current memory is recalled.  
Note: When a setting is recalled the output automatically turns off.

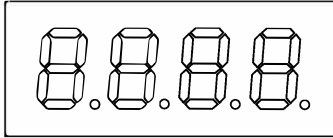
## SPECIFICATIONS

Note: The specifications in the table below have all been tested in temperatures ranging from 25°C down to -5°C, and after being warmed up for 20 minutes.

| Model                  | 72-10495   | 72-10500   | 72-10505   |
|------------------------|------------|------------|------------|
| Voltage Range          | 0-30V      | 0-30V      | 0-30V      |
| Current Range          | 0-5A       | 0-3A       | 0-3A       |
| <b>Load Regulation</b> |            |            |            |
| Voltage                | ≤0.1%+5mV  | ≤0.01%+3mV | ≤0.01%+3mV |
| Current                | ≤0.1%+10mA | ≤0.1%+5mA  | ≤0.1%+5mA  |

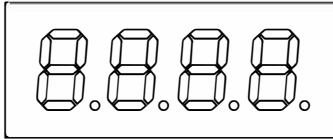
## DISPLAY

Voltage level



Voltmeter displays the setup value of output voltage.

Current level



Displays the setup value of the output current.

## CONDITION INDICATION

- OVP is the indicator of overvoltage protection.
- When the overvoltage function is turned on the “● OVP” indicator lights up.
- When the output voltage is higher than the protection setup value, due to unexpected conditions, the output cuts off and the OVP indicator flickers.
- Press the OVP key again and the power supply will recover.

|       |  |
|-------|--|
| ● OCP | OCP is OCP indicator. When overcurrent function is turned on, the OCP indicator light turns on.                        |
| ● C.C | C.C is the constant current indicator. When the power supply is in the mode of constant current, the light will be on. |
| ● C.V | C.V is the constant voltage indicator. When the power supply is in the mode of constant voltage, the light will be on. |
| ● OUT | OUT is output indicator. If the light is on then there is a voltage output in the output terminal.                     |

## BEEP ON/OFF

- By default, the beep sound is enabled.
- To turn off the beep, press the OCP (BEEP) key for two seconds.
- A beep sounds, meaning the beep setting will be turned off.
- To enable the beep, press the OCP (BEEP) key for two seconds again.

## FRONT PANEL LOCK

Press the LOCK key to lock the front panel key operation. The key LED will turn on. To unlock, press and hold the LOCK key for two seconds.

## OUTPUT SETUP

### Panel Operation

- Connect the load to the front port, CH1 +/-.
- Press the Voltage/Current key to switch between the voltage adjustment and current adjustment. Adjust the voltage and current with the Voltage/Current adjustment knob.
- By default, the voltage and current knob work in coarse mode. In order to activate in fine mode, press the key to choose between coarse or fine mode.
- Turning on the output and pressing the output key will turn on the key LED and display CV or CC mode.

## SERIES LINEUP/MAIN FEATURES

| Model    | V Meter | A Meter | USB | Resolution |
|----------|---------|---------|-----|------------|
| 72-10495 | 4 digit | 4 digit | No  | 10mV/1mA   |
| 72-10500 | 4 digit | 4 digit | No  | 10mV/1mA   |
| 72-10505 | 4 digit | 4 digit | No  | 10mV/1mA   |

## Performance

- Low noise: cooling fans controlled by heatsink temperature.

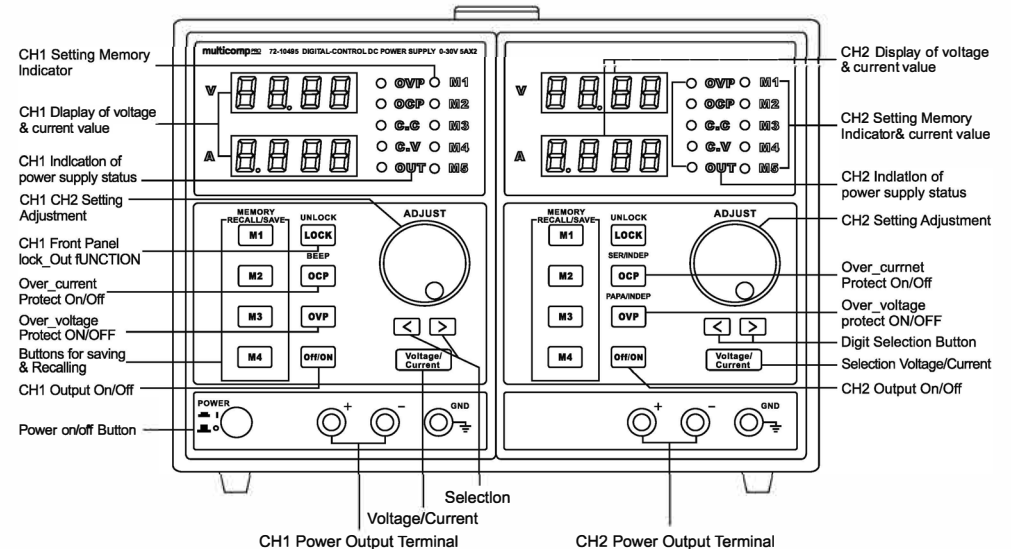
## Operation

- Constant voltage/constant current operation.
- Output on/off control.
- Digital panel control.
- Twin 5 sets of panel setup save/recall.
- Coarse and fine voltage/current control.
- Software calibration.
- Beep output.
- Key lock function.

## Protection

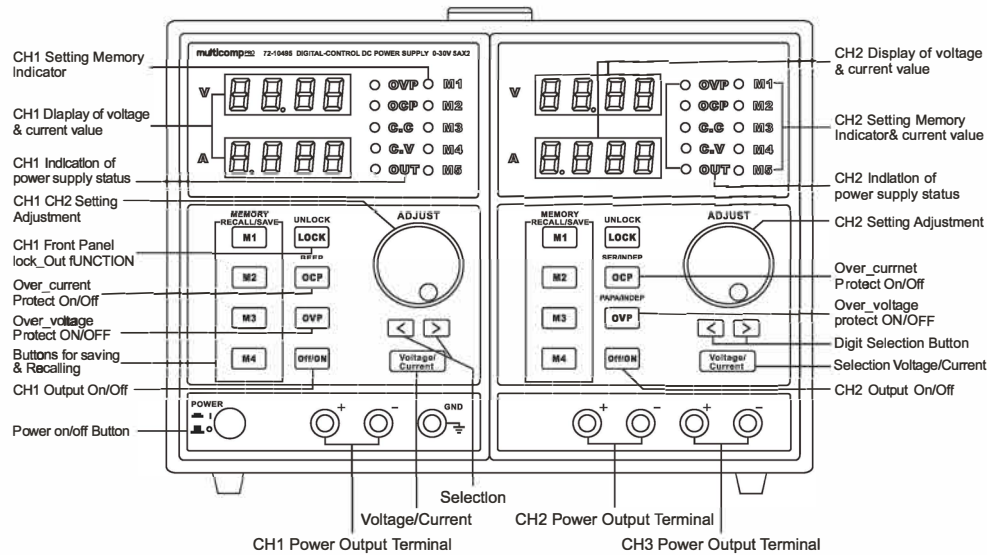
- Overload protection.
- Reverse polarity protection.
- Short circuit protection.

## FRONT PANEL OVERVIEW



72-10495 & 72-10500

## FRONT PANEL OVERVIEW



72-10505

## STORAGE INDICATION

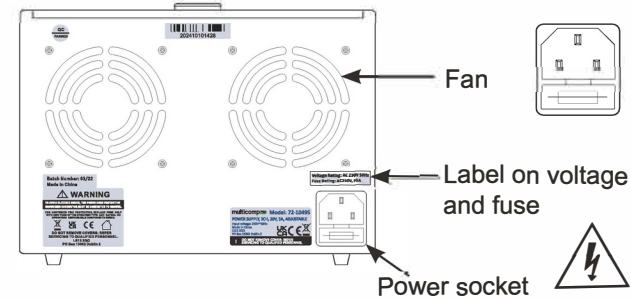
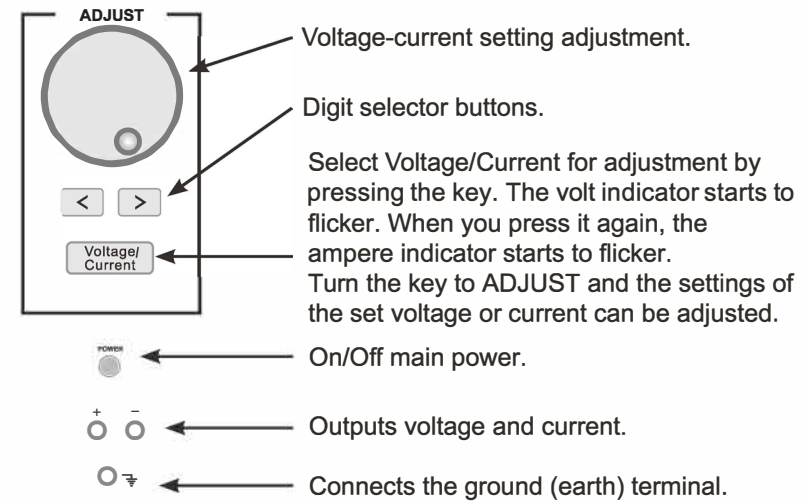
- M1
  - M2
  - M3
  - M4
  - M5
- Indication of saving and recalling five setups stored internally.

## BRIEF INTRODUCTION OF PANEL OPERATION



- Saves or recalls panel settings. For settings, 1 - 4 are available.

- UNLOCK
- LOCK → Front panel lock-out function.
- BEEP
- OCF → Pressing this key for more than 2 seconds will turn beep on/off.
- OVP → Overvoltage protection on/off.
- OFF/ON → Output on/off.



The power cord socket accepts AC values: 115V/230V, 50/60Hz.

Please refer to the fuse parameters on the back of the fuse label, in order to replace the fuse with the specified fuse.

Ensure the correct type of fuse is installed prior to powering up.

## OPERATION



Connect the AC power cord and select the corresponding AC voltage according to the back label, then connect the AC power cord to the socket on the back panel.



Press the power switch to turn the power on. The display initialises, showing the model of the machine and then the setting level, which is recalled from the last use.



Press the power switch again to turn the power off.

## OUTPUT ON/OFF

### Panel Operation

- The key LED will turn on once you have pressed the "output" key to turn output on.
- The key LED will then turn off once you have pressed the "output" key again to turn off output.

Note: If there are any of the following conditions, the output will automatically turn off:

- OVP means there is abnormal high voltage output or input on the output terminal.
- When OCP is on, the output current reaches the setting current value.
- Recalling other setups from the memory.