

Digital-Control and Programmable Twin DC Power Supply

User Manual






Part Number: 72-10495, 72-10500 and 72-10505

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

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

Storage Environment

Location	Indoor
Relative Humidity	<70%
Temperature	-10°C to +70°C

Fuse



Model	110V / 120V	220V / 230V
72-10495	T10A/250V (20×5mm)	T5A/250V (20×5mm)
72-10500	T8A/250V (20×5mm)	T4A/250V (20×5mm)
72-10505	T8A/250V (20×5mm)	T4A/250V (20×5mm)

- 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 blowout is fixed before replacing the fuse.

Series Lineup / Main Features

Part Number	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.

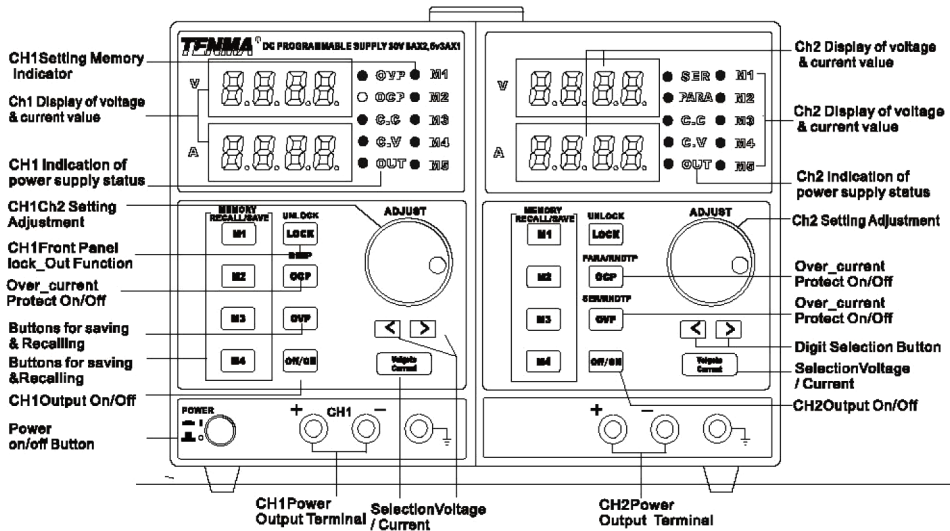
Operation

- 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

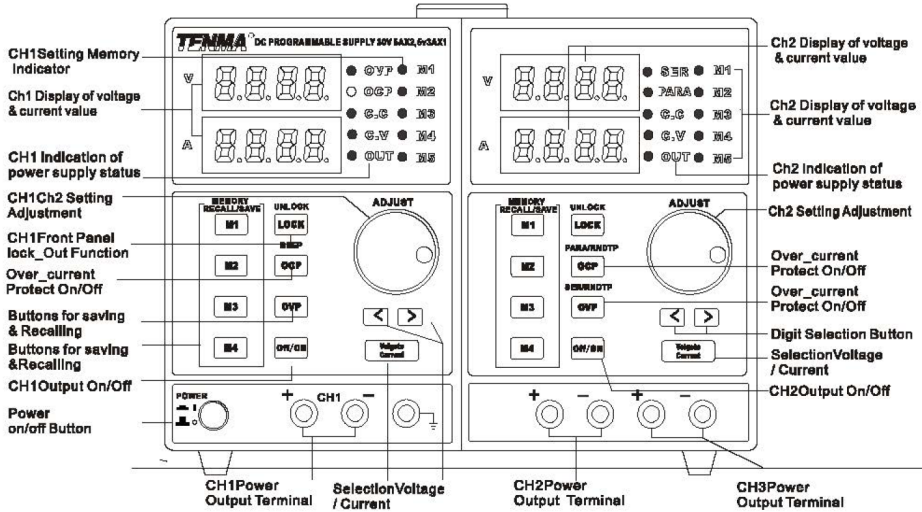
- Overload protection .
- Reverse polarity protection.
- Short circuit protection.

Front Panel Overview



72-10495, 72-10500

Front Panel Overview

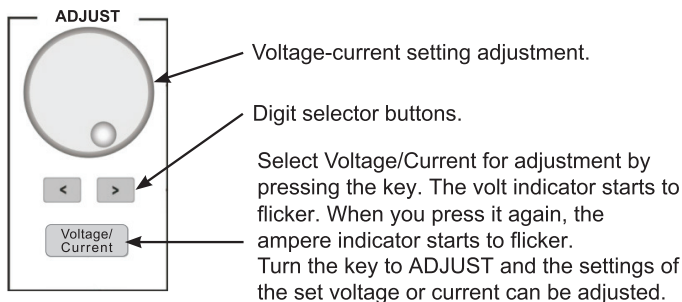
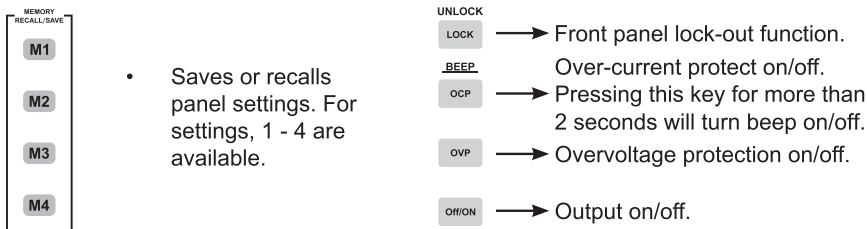


72-10505

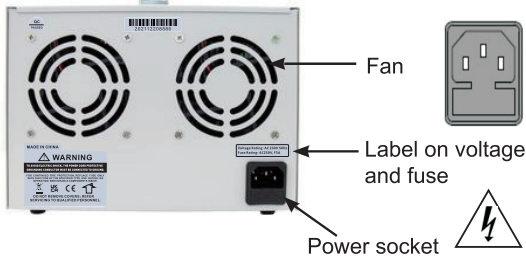
Storage Indication

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

Brief Introduction of Panel Operation

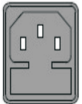


- ← On/Off main power.
- ← Outputs voltage and current.
- ← Connects the ground (earth) terminal.



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.

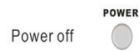
Operation



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

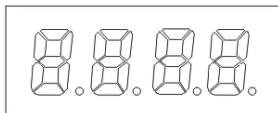
- The key LED will turn on once you have pressed the “output” key to turn output on.
- The key LED will then turn off once you have pressed the “output” key again to turn off output.

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.

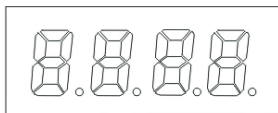
Display

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.

Save Setup

Background	The front panel settings can be stored into one of the four internal memories.
Contents	<p>The following list shows the setup contents:</p> <ul style="list-style-type: none"> • Fine/coarse knob editing mode • Beep on/off • Output voltage/current level <p>The following settings are always saved as "off":</p> <ul style="list-style-type: none"> • Output on/off • Front panel lock on/off
Panel Operation	Press one of the four buttons (M 1, 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.



Press any button of M1 to M4.

For example, the memory of the panel setting is recalled in M1.

After you recall M4, rotate the shuttle knob and then M5 is recalled.

- M1
- M2
- M3
- M4
- 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.

Part Number	72-10495	72-10500	72-10505
Voltage Range	0-30V	0-30V	0-30V
Current Range	0-5A	0-3A	0-3A
Load Regulation			
Voltage	≤0.1%+5mV	≤0.01%+3mV	≤0.01%+3mV
Current	≤0.1%+10mA	≤0.1%+5mA	≤0.1%+5mA
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	≤3mArms	≤3mArms	≤3mVrms
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

Part Number	72-10495	72-10500	72-10505
Reaction Time			
Voltage Rise	≤100mS	≤100mS	≤100mS
Voltage Drop	≤100mS (10% rated load)	≤100mS (10% rated load)	≤100mS (10% rated load)

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

Accessories: User manual and power cord

Part Number	Dimensions	Weight
72-10495	220×156×260mm	9.1kg
72-10500	220×156×260mm	6.5kg
72-10505	220×156×260mm	6.7kg



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 & Electronics 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.

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