

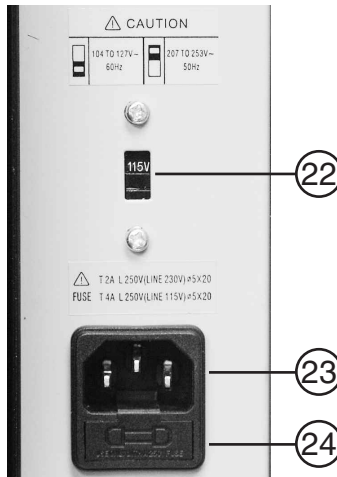
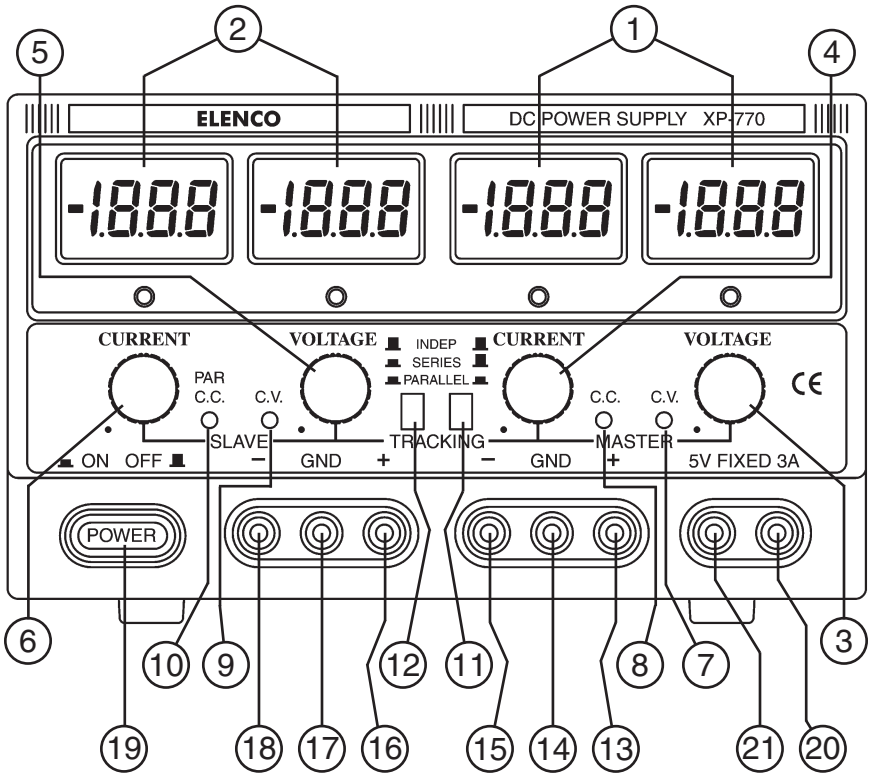
Triple-output Regulated DC Power Supply

Instruction Manual

Model XP-770



COMPONENT OVERVIEW



1. Voltage and current indication for master output
2. Voltage and current indication for slave output
3. Voltage adjustment of master output
4. Current adjustment of master output
5. Voltage adjustment of slave output
6. Current adjustment of slave output
7. Constant voltage mode indicator light for master output
8. Constant current mode indicator light for master output
9. Constant voltage mode indicator light for slave output
10. Constant current mode indicator light for slave output and double current output indicator light in parallel mode
11. Independent, series and parallel selector switch
12. Independent, series and parallel selector switch
13. Positive output terminal of master output
14. Ground connection terminal of case
15. Negative output terminal of master output
16. Positive output terminal of slave output
17. Ground connection terminal of case
18. Negative output terminal of slave output
19. Main power on/off switch
20. Fixed 5V positive output terminal
21. Fixed 5V negative output terminal
22. AC input voltage switch
23. AC input
24. Fuse holder

INTRODUCTION

Congratulations on your selection of a top quality power supply! The XP-770 is a triple-output regulated power supply providing two variable outputs (0-20V @ 2A) and one fixed (5V @ 3A). Four LCD displays allowing the output voltages and currents to be displayed simultaneously. The variable outputs can work independently, in series, or in parallel modes. The highest output voltage is the sum of twice the voltage value in series mode and the highest output current is the sum of twice the current value when in parallel mode.

FEATURES

Four LCD displays for voltage and current
Independent voltage and current controls
Constant voltage (CV) or constant current (CC) operation
LED indication for CV and CC for variable outputs
Series and parallel mode for variable outputs
Overload and short protected.
Selectable AC input voltage, 115 or 230VAC

SAFETY PRECAUTIONS

Certain safety precautions must be observed when this power supply is used with external circuits that are connected to AC power lines. There is always some danger when working with electrical equipment or circuits that operate at hazardous voltages. You should thoroughly familiarize yourself with the equipment before using it. High voltage may appear at unexpected points in defective equipment.

The XP-770 is equipped with a three-wire line cord which grounds the chassis to power line ground. Do not cut off or disable the ground plug. The power supply secondary circuits are isolated from the 115/230V primary circuit via the power transformer. When working with other equipment, this may not always be the case. Always be familiar with the equipment rating. Keep in mind that defective equipment can have dangerous voltages in unexpected places.

OPERATING INSTRUCTIONS

1. Set the AC input voltage switch on the back to the correct setting and the correct fuse (4A - 115V, 2A - 230V) installed.
2. Set the power switch to the off position.
3. Plug the power cord into the power socket on the back of the unit.
4. Plug the power cord into an AC output. Note: Make sure enough space is left for heat dissipation.

5. Check that the voltage rating of the equipment does not exceed the power supply's rating.

Dual Power Supply Used in Independent Mode

Set the tracking switches 11 & 12 to the OUT position.

Constant Voltage Mode

1. Turn the master and slave output current adjustment control knobs (4 & 6) clockwise to the maximum position. Adjust the voltage adjustment control knobs (3 & 5) counter clockwise to the minimum position.
2. Turn the power switch ON. Both CV LED's should be lit.
3. Adjust the master and slave voltage adjustment control knobs (3 & 5) to the desired voltage.
4. Connect the positive and negative output terminals to a load or similar component.

Constant Current Mode

1. Turn the master and slave output voltage adjustment control knobs (3 & 5) clockwise to the maximum position. Adjust the current adjustment control knobs (4 & 6) counter clockwise to the minimum position.
2. Turn the power switch ON. Both CC LED's should be lit.
3. Connect the positive and negative output terminals to a load or similar component.
4. Adjust the master and slave output current adjustment control knobs (4 & 6) to give the desired current.

Current Limit Protection Mode

(DC power supply: Output voltage less than 20V, or output current less than 2A)

1. Turn the master and slave output current adjustment control knobs (4 & 6) counter-clockwise to the minimum position. Turn the power switch ON.
2. Adjust the master and slave voltage adjustment control knobs (3 & 5) to give the desired output voltage and then connect the output terminals 13 with 15 and 16 with 18 respectively.
3. Adjust the master and slave output current adjustment control knobs (4 & 6) to give the desired value or current limit. Remove the connection between 13 & 15 and 16 & 18, and connect the load.

Dual Power Supply Used in Series Mode

1. Set the tracking switch 12 to the IN position and tracking switch 11 to the OUT position. Adjust the master and slave output current adjustment control knobs (4 & 6) clockwise to the maximum position. Adjust controls 3 and 5 to the desired output voltage. The voltage of the master output should be tracked by the slave output. The highest output voltage is the sum of the value of both master and slave outputs when connecting the load to terminals 13 & 18.
2. In Series Mode, the current adjustment is independent. If the slave control (6) is not at the maximum position but at a current limiting position (CC LED lit), then the voltage of the slave output will not track the master output.
3. In Series Mode, terminals 15 & 16 should be connected together with a thick conductive wire to prevent damage to the unit in the event of an overload.
4. In Series Mode, remove any connection between the master or slave negative terminals and the ground connection terminals. Otherwise, it is possible to short-circuit the slave output.

Dual Power Supply Used in Parallel Mode

1. Set the tracking switches 11 & 12 to the IN position. The master and slave outputs will now be in parallel mode. Adjust control 3 to the desired output voltage and the voltage of the master and slave outputs should change identically.
2. In Parallel Mode, the output current adjusted by the master output current adjustment control knob (4) and the slave control (6) has no effect. The maximum output current is the sum of the master and slave output currents.
3. In Parallel Mode, terminals 13 & 16 and 15 & 18 should be connected respectively with thick conductive wire to prevent damage to the unit in the event of an overload.

CAUTION:

- In the event of a short circuit at the output, the current will limit at the value set by the current controls. However, the unit should be turned OFF and the short circuit removed before continuing use.
- The unit must be unplugged before servicing. Servicing should be performed by a qualified repairperson with knowledge in electrical hazards.

- The unit should be stored in a dry and well-ventilated place and the power cord removed if storing for a long period of time.
- Never place any objects on the power supply.
- Do not obstruct the ventilation holes.
- Avoid contacting the heat sink of the power supply as it can become very hot. Contacting the heat sink when it is hot could result in skin burns or damage to the equipment in contact with them.
- Never move or pull the power supply using the power cord or output lead.
- The XP-770 is designed for INDOOR USE ONLY.

SPECIFICATIONS

Output Voltage	Output Current	Line Regulation		Load Regulation		Ripple & Noise	
		CV	CC	CV	CC	CV	CC
0-20V	0-2A	≤ 0.01% +2mV	≤ 0.2% +2mA	≤ 0.01% +3mV	≤ 0.2% +3mA	≤ 0.5mV rms	≤ 3mA rms
5V ± 0.25V	3A	≤ 1.5mV	–	≤ 15mV	–	≤ 5mV rms	–

Number of Outputs	Three / two variable and one fixed.
Input Voltage	104 – 127VAC (60Hz) • 207 – 253VAC (50Hz)
Protection	Current limit and short circuit protection.
Display Accuracy	Voltage ±1% +2 digits, Current ±2% +2 digits
Environment:	32°F - 104°F (0°F - +40°C), relative humidity <90%
Dimensions (WxHxD)	(10.2 x 6.5 x 14”), (25.9 x 16.5 x 35.6cm)
Weight	12.9 lbs. / 5.85 kg.

MAINTENANCE

Cleaning – Using a soft moistened cloth, remove any dirt on the outside of the case. The power supply should be used in a normal working environment.

Servicing – If the unit becomes inoperative or damage, Elenco® Electronics or a qualified repairperson should only perform the repair and calibration.

Fuse Replacement

The power supply will not work if the fuse is blown or not installed. Check and repair any existing problems before installing new fuse. Only use fuses with same specification as original the one.

Warning - To prevent fire use only 250V or greater with the specified current.

1. Disconnect the AC power before replacing the fuse.
2. Insert a small screwdriver into fuse holder slot (located between fuse holder and receptacle) and pry fuse holder from receptacle.
3. Replace the blown fuse and insert holder into receptacle. Be sure that the fuse is installed so that the correct line voltage is selected.

Elenco® fuse part numbers:

AC Power 230V	2A fuse 250V (5 x 20mm)	Part #: 533020
AC Power 115V	4A fuse 250V (5 x 20mm)	Part #: 531044

4. Plug line cord back into the AC output and test unit.



TWO YEAR WARRANTY

All Elenco® models are guaranteed for two full years on all parts and service. For the first 3 months, your power supply is covered at absolutely no charge. For the remaining 21 months, a nominal service charge is required to cover shipping and handling.

When returning merchandise for repair, please include proof of purchase, a brief letter of explanation of problem, and sufficient packing material. Before returning any merchandise please call our service department at (847) 541-3800 to obtain a return authorization number (RMA).

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