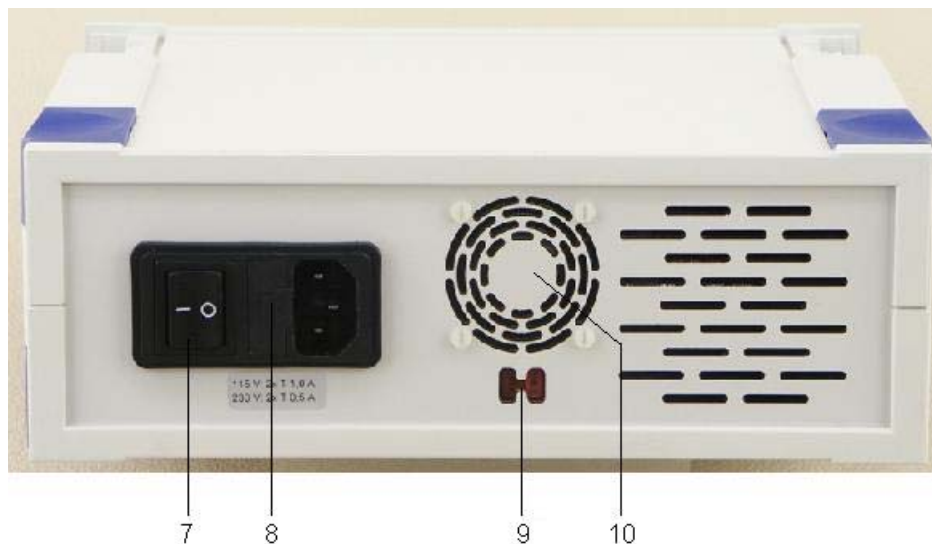
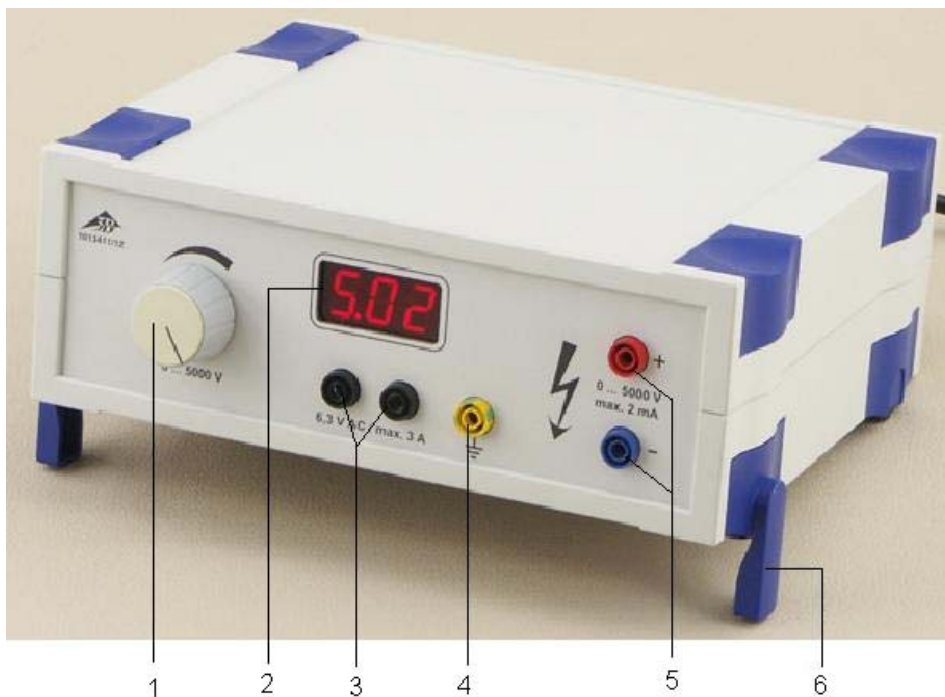


High Voltage Power Supply E (230 V, 50/60 Hz) 1013412
High Voltage Power Supply E (115 V, 50/60 Hz) 1017725

Instruction sheet

12/13 SD/ALF



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|--------------------------|-----------------------|---------------------------|
| 1 High voltage regulator | 5 High voltage output | 9 Voltage selector switch |
| 2 Voltage display | 6 Folding feet | 10 Fan |
| 3 Heater voltage output | 7 Mains on/off switch | |
| 4 Earthing socket | 8 Fuses | |

1. Safety instructions

The high voltage power supply E conforms to all safety regulations for electrical measuring, control, monitoring and laboratory equipment, as specified under DIN EN 61010, Section 1, and the equipment has been designed to meet protection class I. It is intended for operation in a dry environment, suitable for the operation of electrical equipment and systems.

Safe operation of the equipment is guaranteed, provided it is used correctly. However, there is no guarantee of safety if the equipment is used in an improper or careless manner.

If it may be assumed for any reason that non-hazardous operation will not be possible (e.g. visible damage), the equipment should be switched off immediately and secured against any unintended use.

In schools and other educational institutions, the operation of the power supply unit must be supervised by qualified personnel.

- Before using the power supply unit for the first time, confirm that the specifications printed on the rear side of the housing are compatible with the local mains voltage.
- Before using the power supply unit for the first time, check the housing and the mains lead for any damage. In the event of any malfunction/operational defect or visible damage, switch off the unit immediately and secure it against unintended use.
- The instrument may only be connected to the mains via a socket that has an earth connection.
- Before making any connections, check the experiment leads for damaged insulation and exposed wires.
- Replace a faulty fuse only with one matching the specifications stated at the rear of the housing.
- Disconnect the equipment from the mains before replacing a fuse.
- Never short the fuse or the fuse holder.
- Never cover the air vents in the housing. This is necessary in order to ensure sufficient circulation of air required for cooling the internal components of the equipment.
- The equipment may only be opened/repaired by qualified and trained personnel.

2. Description

The high voltage power supply E is a universally usable non-earthed high voltage source for operating electron tubes.

It provides a continuously variable stabilized high voltage with passive current limitation, in a housing that is safe to handle. It also incorporates a transformer, insulated against high voltage, to supply the cathode heater voltage for an electron tube. A temperature-controlled fan protects the equipment from overheating.

The 1017725 high voltage power supply is for operation with a mains voltage of 115 V ($\pm 10\%$), and the 1013412 unit is for operation with a mains voltage of 230 V ($\pm 10\%$).

3. Technical data

Mains voltage:	115 / 230 V AC $\pm 10\%$, see rear of housing
Mains frequency:	50 / 60 Hz
Fuses:	115 V: 2x 1 A slow-blow, 230 V: 2x 0.5 A slow-blow
High voltage output:	0 - 5000 V DC, max. 2 mA
Heater voltage output:	6.3 V AC, max. 3 A, high voltage resistant up to 6 kV
Overload protection:	Primary fuse: see rear of housing Secondary protection: current-limiting resistors
Terminals:	4 mm safety sockets
Display:	digital
Display precision:	1% + 2 digits
Ambient temperature:	5°C to 40°C
Max. relative humidity:	80 %
Dimensions:	240x220x90 mm ³ approx.
Weight:	2.1 kg approx.

4. Operation

4.1 General information

- Before switching on the power supply, set the high voltage regulator to zero (turn fully to the left).
- Connect the power supply to the experimental setup.
- Do not switch the power supply on until the experiment has been fully assembled.

- Changes to the experimental setup must only be made with the power supply switched off.
- Set the high voltage regulator to give the required voltage.
- Before switching off the power supply, set the high voltage regulator to zero again (turn fully to the left).

4.2 Changing the fuse

- Turn off the power switch and unplug the mains plug.
- Pry out the fuse holder on the rear of the power supply using a flat-head screwdriver (see Fig.1).
- Use the screwdriver from the side of the mains euro socket.
- Replace the fuse and reinsert the holder in its socket.



Fig. 1 Changing the fuse

5. Storage, cleaning and disposal

- Keep the power supply unit in a clean, dry and dust free place.
- Always unplug the mains plug before cleaning.
- Do not clean the unit with volatile solvents or abrasive cleaners.
- Use a soft, damp cloth to clean it.
- The packaging should be disposed of at local recycling points.
- Should you need to dispose of the equipment itself, never throw it away in normal domestic waste. Local regulations for the disposal of electrical equipment will apply.



6. Example applications

Operation of electron diffraction tube

Additionally required:

1 Electron Diffraction Tube D	1013885
1 Tube Holder D	1008507

Note: either the anode or the cathode can optionally be connected to ground potential since the heater output is resistant to high voltage.



Fig. 2 Operation of electron diffraction tube

