

Spectrum Tube Power Supply

1000683 (115 V, 50/60 Hz)
1000684 (230 V, 50/60 Hz)

Instruction sheet

05/18 ALF/UD



- 1 Mains lead
- 2 Lower clamp with spring clip
- 3 On/off switch
- 4 Fuse holder
- 5 Protective window
- 6 Upper clamp

1. Safety instructions

The spectrum tube power supply unit 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 AC/DC power supply unit must be supervised by qualified personnel.

- Before using the DC 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 DC 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 visi-

ble damage, switch off the unit immediately and secure it against unintended use.

- The equipment may only be opened/repared by qualified and trained personnel.
- Do not insert or remove spectrum tubes unless the spectrum tube control unit is switched off.

The spectrum tube power supply is exclusively designed for use with spectrum tubes 1003402 to 1003417 (see list in Section 4, "Accessories").

- Do not use the spectrum tube power supply with anything other than spectrum tubes 1003402 to 1003417.

Neither the spectrum power supply unit nor spectrum tubes 1003402 to 1003417 are suitable for use over lengthy periods of time. In particular, the lifetime of the tubes themselves will be lengthened by using them in cycles.

- Ideally the tubes should not be left switched on for longer than 30 seconds at a time and should be switched off for at least 30 seconds between uses.
- Do not allow the spectrum tubes to overheat.

2. Description

The spectrum tube power supply unit is intended for the operation of spectrum tubes 1003402 to 1003417. It provides for undisturbed and constant illumination and increases the lifespan of the tubes themselves. A clamp with a spring clip ensures that spectrum tubes can be safely mounted and make good contact. Full insulation of the clamps and a protective window ensure safe operation.

The spectrum tube power supply unit with order number 1000683 is designed for a mains voltage of 115 V ($\pm 10\%$) while the version with order number 1000684 is for 230 V ($\pm 10\%$).

3. Technical data

Output voltage:	5000 V
Mains voltage:	See rear of housing 230 / 115 V AC, 50/60 Hz
Fuse:	T 1.0 A
Dimensions:	370 x 120 x 110 mm ³
Weight:	2.9 kg approx.

4. Accessories

List of available spectrum tubes

Spectrum tubes	Cat. No.
Air	1003402
Argon	1003403
Bromine	1003404
Carbon dioxide	1003405
Chlorine	1003406
Deuterium	1003407
Helium	1003408
Hydrogen	1003409
Iodine	1003410
Krypton	1003411
Mercury	1003412
Neon	1003413
Nitrogen	1003414
Oxygen	1003415
Water vapor	1003416
Xenon	1003417

5. Operation

5.1 General information

- It is recommended that spectrum tubes be handled with a cloth or gloves in order to avoid greasy fingerprints.
- Do not insert or remove spectrum tubes unless the spectrum tube control unit is switched off.
- Open the protective window by pulling on the right upper or lower edge.
- To insert the spectrum tube into the power supply, snap it into the lower tube clamp with the spring clip.
- Push the tube gently downwards and fasten it in place with the upper clamp.
- Close the protective window.
- Turn on the spectrum tube power supply.
- Use a spectroscope/spectrometer to observe the spectral lines.
- Before removing the spectrum tube, turn off the tube power supply and allow the tube to cool.
- Open the protective window.
- Push the tube gently downwards and slip it out of the upper clamp.

5.2 Changing the fuse

- Turn off the power switch and unplug the mains plug.
- Unscrew the fuse holder on the back of the stand base with a screwdriver.
- Replace the blown fuse with a fuse matching the original and reinsert the holder in its socket.

6. Storage, cleaning and disposal

- Keep the equipment in a clean, dry and dust-free place.
- Before cleaning the equipment, disconnect it from its power supply.
- 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.



