

SEK – Power supply (230 V, 50/60 Hz) 1021686

SEK – Power supply (115 V, 50/60 Hz) 1021687

Instruction manual

03/20 GH



1. Safety instructions

The SEK power supply unit corresponds to the safety regulations for electrical measuring, control and laboratory equipment according to DIN EN 61010 section 1 and is designed in accordance with safety class II. The built-in safety transformer complies with the DIN EN 61558-2-6 standard. This means the SEK power supply unit conforms to RiSU. It was designed for operation in dry rooms, suitable for electrical equipment.

When operated properly and according to instructions, safety is ensured when working with the equipment. However, safety is not guaranteed if the equipment is operated incorrectly or handled carelessly.

If there is reason to assume that safe operation is no longer possible (e.g. visible damage), the apparatus must be taken out of operation immediately.

In schools and training centres, operation of the apparatus is to be monitored by trained personnel.

- Prior to putting the unit into initial operation, check whether the value set at the voltage selector switch for the mains power voltage on

the reverse of the housing corresponds to the local requirements.

- Prior to putting into operation, examine the housing and the mains power line for any damage and if any operating disturbances arise or visible damage occurs to the equipment, take it out of operation and secure it from being put back into operation inadvertently.
- Check the patch cables and experiment leads for damaged insulation or exposed wires prior to connection.
- Only replace a defective fuse with a fuse having the same value as the original (see rear side of the housing).
- Pull the mains power plug prior to changing a fuse.
- Never short-circuit a fuse or a fuse holder.
- Only permit the apparatus to be opened by a qualified electrician.

2. Description

The SEK power supply unit is an AC/DC power pack for student experiments, in particular for SEK experiments on electricity and magnetism 1008532.

The AC/DC output voltage can be adjusted in steps of 1.5 V, 3.0 V, 4.5 V and 6.0 V. The maximum output power is 4 VA. AC and DC

circuits can be used together but then only up to a total power of 4 W.

The DC voltage is stabilized and regulated.

The SEK power supply unit 1021687 is designed for a mains voltage of 115 V ($\pm 10\%$), 1021686 for 230 V ($\pm 10\%$).

3. Operating elements



Fig. 1 Operating elements

- 1 Input jack C8, mains voltage
- 2 Fuse holder
- 3 Power switch
- 4 Voltage selector
- 5 AC voltage output
- 6 DC voltage output

4. Technical data

Mains voltage:	SEK power supply unit 1021687 115V SEK power supply unit 1021686 230V (cannot be switched)
Input voltage:	Socket C8 with 2 poles IEC320 C7, input power 7 VA
Output voltage:	Adjustable in steps of 1.5 V, 3.0 V, 4.5 V and 6.0 V
Output current:	Max. 1A
Output power:	Max. 4 VA
Mains frequency:	50 / 60 Hz
Fuse protection:	For 115 V mains voltage, T 1.0 A, 250V For 230 V mains voltage, T 0.5 A, 250V
Overload protection:	Against short-circuits and overload currents by an integrated thermostatic switch (automatically reset after fault removal).
Outputs:	Via 4-mm safety sockets, short-circuit- proof

Electromagnetic compatibility:

Emitted interference:	EN 55011:2009
Interference resistance:	EN 61326-1:2013

Electrical safety:

Safety stipulations:	RiSU compliant DIN EN 61010-1 DIN EN 61558-2-6
Transformer:	Safety transformer according to DIN EN 61558-2-6 (RiSU compliant)
Safety class:	2
Pollution severity:	2
Degree of protection:	IP20
Dimensions/ cm ³ :	17.0 x 10.5 x 6.0
Weight/ g:	688

5. Operation

5.1 General instructions

- Connect the experiment set-up with the power supply unit.
- Only switch the power supply on when the set-up has been completed.
- Modifications to the experiment set-up may only be performed when the system is OFF and de-energized.
- Set to the desired voltage at the voltage selector switch.

5.2 Tapping voltage

- To tap an AC voltage, connect the black 4 mm connection terminals (5) to the experiment set-up.
- To tap a DC voltage, connect the blue negative and red positive pole (6) to the experiment set-up.

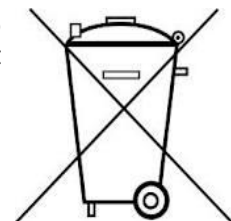
5.3 Replacing fuses

- Switch off the power supply and make sure that the mains plug has been pulled out.
- Open the fuse holder on the side of the unit using a flat-head screwdriver and unscrew it.
- Replace the fuse and screw the holder back on.

6. Storage, cleaning, disposal

- Store the apparatus in a clean, dry and dust-free location.
- Disconnect from the mains power prior to cleaning the unit.
- Do not use aggressive agents or solvents to clean the equipment.
- Use a soft, damp cloth to clean.
- Dispose of the package at a local recycling depot.

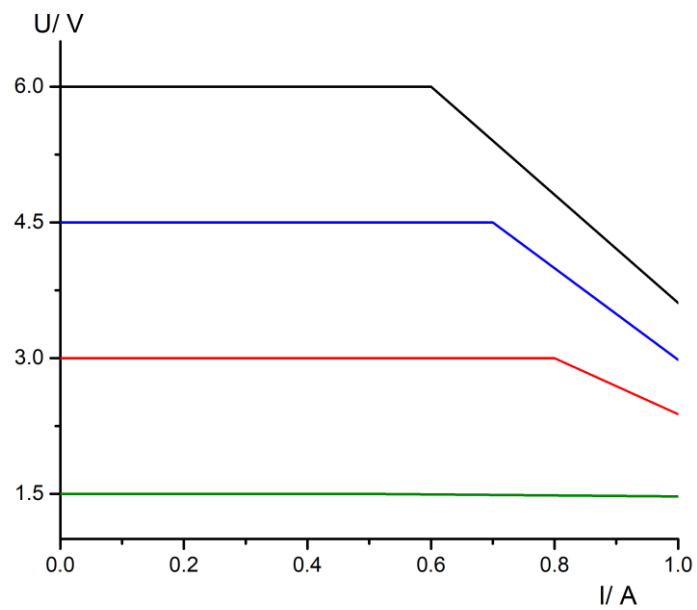
If the device itself needs to be disposed of, it does not belong in the normal household waste. When used in private households, it can be disposed of with the local public recycling facilities.



- Please comply with all valid regulations regarding the disposal of electrical scrap.

U/I characteristics (V/I)

DC range:



AC range:

