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Operating instructions



The unit complies with the corresponding EC guidelines.

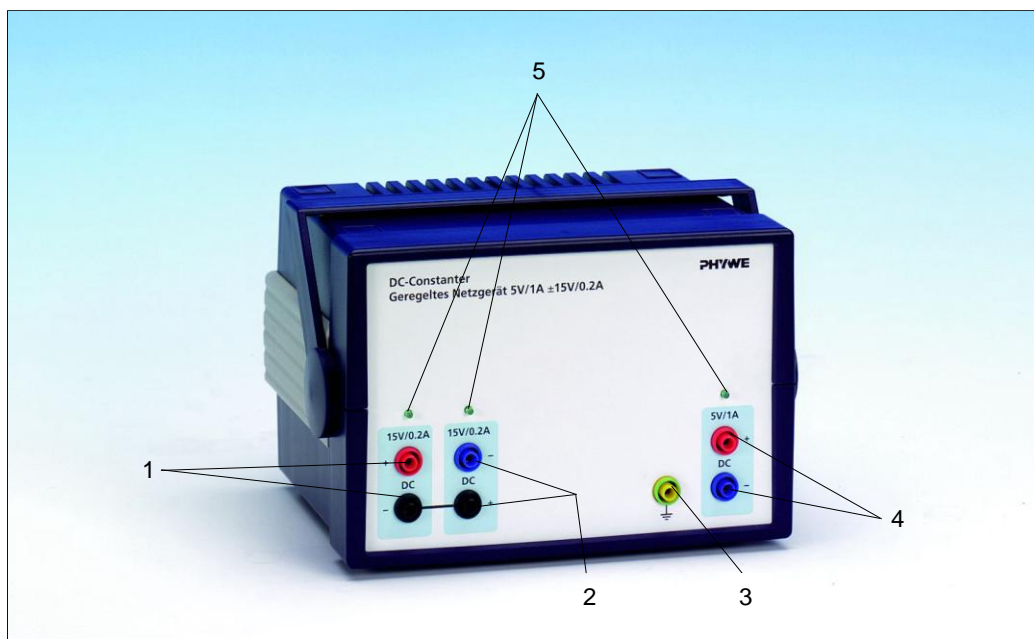


Fig. 1: Front view of the Power supply DC: 5 V, 1 A; ± 15 V, 0.2 A, 13502-93.

CONTENTS

1 SAFETY PRECAUTIONS

2 PURPOSE AND DESCRIPTION

3 FUNCTIONAL AND OPERATING ELEMENTS

4 HANDLING

5 NOTES ON OPERATION

6 TECHNICAL SPECIFICATIONS

7 NOTES ON THE GUARANTEE

8 WASTE DISPOSAL

- Check that your mains supply voltage corresponds to that given on the type plate fixed to the instrument.
- Install the instrument so that the on/off switch and the mains connecting plug are easily accessible.
- Do not cover the ventilation slots.
- Take care that no liquids or objects enter in through the ventilation slots.
- Do not start up this instrument in case of visible signs of damage to it or to the line cord.

2 PURPOSE AND DESCRIPTION

This unit is a small power supply with three ungrounded and short-circuit proof fixed voltage outputs, especially suited for use in schools, laboratories and training institutions. The 5 V output is also suited for TTL circuits.

3 FUNCTIONAL AND OPERATING ELEMENTS

The unit has a shock proof plastic casing. A folding handle is integrated in the upper cover of the housing. The same item in the bottom plate is used to set up the unit tilted backwards. Four rubber feet assure stable standing and avoid slipping of the unit. The unit can be stacked together with other units in the same rack, the rubber feet fitting into corresponding recesses in the upper part of the casing of the lower unit, in order to increase slip-proof conditions. Tilted set-up only may be used for the upper unit in case of stacking.

The supplied cable is used to connect the unit to the grid; for this, the cable is plugged into the connecting plug at the back of the unit. Next to the connection plug, there is a fuse holder which can only be opened if the main plug has been pulled out.

1 SAFETY PRECAUTIONS



- Carefully read these operating instructions completely before operating this instrument. This is necessary to avoid damage to it, as well as for user-safety.
- Only use the instrument for the purpose for which it was designed.
- Only use the instrument in dry rooms in which there is no risk of explosion.

Changing the primary safety fuse

The fuse holder is in the upper part of the mains socket of the instrument, and so is only accessible when the connecting cord is not plugged in. Unplug the connecting cord, open the fuse holder using a screwdriver, take out the defect fuse and replace it with a new one (first check the specification of this against the data on the type plate), then fit the fuse holder back in the mains socket.

Should this fuse blow when the instrument is switched on, never replace it with a more resistant fuse! A defect is indicated and the instrument must be returned to the Phywe service department for repair.

The **two-pole mains switch** for operating the unit is situated in the immediate vicinity of the equipment connecting plug at the back of the unit. All other functional and operating elements are located on the front panel of the unit (see fig.1):

- 1 *Output +15 V DC, 0.2 A*
two 4 mm safety connectors; the negative connector is connected to the positive connection of negative exit (2).
- 2 *Output -15 V DC, 0.2 A*
two 4 mm safety connectors; the positive connector is connected to the negative connection of positive exit (1).
- 3 *"Earth" connector*
green-yellow safety connector, connected to the casing grounding and to the ground conductor; if necessary, this is used to ground an arbitrary connector of outputs (1/2) and/or of output (4).
- 4 *Output 5 V DC, 1 A*
two 4 mm safety connectors.
- 5 *Function displays*
a green LED indicates in each case whether there is a voltage at the corresponding output. The LED goes out if voltage breaks down, e.g. due to a short-circuit in the connected circuit.

4 HANDLING

The power supply is connected to the grid with the corresponding connection cable, after which it is immediately ready for use. The green LEDs above the output connectors, which indicate functions, show whether there is a voltage on the corresponding output. In case of a short-circuit in the connected circuit, the corresponding LED goes out. The used grid connection cable and the connection cables to take the output voltages may not be longer than 2 m.



Caution!

The power supply may only be used to supply adequate electric experimental set-ups and units. The user is responsible for the functional safety of set-ups connected by him to the power supply. If inadequate circuits are connected to the power supply, even the relatively low power supplied by the latter can cause severe damage (e.g. risk of fire!). To avoid unnecessary risks, it is thus recommended to carefully check the set-up which is to be connected, before switching on the power supply.

Exterior power inputs must be avoided in any case. However, the 5 V input may be connected in series with the ± 15 V input. A maximal voltage of 35 V is thus available. The connection

of the outputs in parallel is not permitted. This could result in the destruction of the outputs.

5 NOTES ON OPERATION

This high-quality instrument fulfils all of the technical requirements that are compiled in current EC guidelines. The characteristics of this product qualify it for the CE mark.

This instrument is only to be put into operation under specialist supervision in a controlled electromagnetic environment in research, educational and training facilities (schools, universities, institutes and laboratories).

This means that in such an environment, no mobile phones etc. are to be used in the immediate vicinity. The individual connecting leads are each not to be longer than 2 m.

The instrument can be so influenced by electrostatic charges and other electromagnetic phenomena that it no longer functions within the given technical specifications. The following measures reduce or do away with disturbances: Avoid fitted carpets; ensure potential equalization; carry out experiments on a conductive, earthed surface, use screened cables, do not operate high-frequency emitters (radios, mobile phones) in the immediate vicinity.

6 TECHNICAL SPECIFICATIONS

(Typical for 25 °C)

Operating temperature range	5...40 °C
Relative humidity	<80 %

Mains supply

The instrument corresponds to protection class I. It is only to be connected to a socket with an earth lead connection.

Connecting voltage (+6 % / -10 %)	see type plate
Mains frequency	50/60 Hz
Power consumption	68 VA
Mains fuse	see type plate

Direct voltage outputs	+15 V (± 5 %)/0.2 A -15 V (± 5 %)/0.2 A 5 V (± 5 %)/1 A
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Maximum short-circuit current	0.3 A (± 15 V) 1.5 A (5 V)
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Stability against changes of the grid	<0.1 %
Stability in case of change of load 0...100 %	<0.5% (15 V) <1.5 % (5 V)

Remaining ripple	<5 mV
Protection against wrong polarity	till max. 1 A
Overload protection	short-circuit proof

Housing dimensions (mm)	206 x 130 x 160 (W, H, D)
Weight	approx. 2 kg

7 NOTES ON THE GUARANTEE

We guarantee the instrument supplied by us for a period of 24 months within the EU, or for 12 months outside of the EU. Excepted from the guarantee are damages that result from disregarding the Operating Instructions, from improper handling of the instrument or from natural wear.

The manufacturer can only be held responsible for the function and technical safety characteristics of the instrument, when maintenance, repairs and alterations to the instrument are only carried out by the manufacturer or by personnel who have been explicitly authorized by him to do so.

8 WASTE DISPOSAL

The packaging consists predominately of environmentally compatible materials that can be passed on for disposal by the local recycling service.



Should you no longer require this product, do not dispose of it with the household refuse.

Please return it to the address below for proper waste disposal.

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