

# PHILIPS



POWER SUPPLY UNIT

**PE1509**

9499 160 06577

5/1271/2

# PHILIPS



PB 3306

GLEICHSPANNUNGSSPEISEGERÄT  
GELIJKSPANNINGSSTABILISATOR  
ALIMENTATION STABILISEE

*Directions for use*  
*Gebrauchsanweisung*  
*Gebruiksaanwijzing*  
*Notice d'emploi*

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# I. TECHNICAL DATA

## General

Mains voltage	: 110, 125, 220, 235 V~ , 50-60 Hz for adjustment, see Fig. 2
Power consumption	: approx. 38 VA max.
Protection	: Temperature safety device on the transformer
Ambient temperature	: 35 °C max.
Voltage between output terminals and earth	: 100 V <sub>rms</sub> max.
Dimensions	: Width        68 mm Height    120 mm Depth    190 mm
Weight	: 1.6 kg net.

## Use as d.c. voltage stabiliser

Voltage	: 0-30 V
Stability	: With mains voltage variations of + or -10 % smaller than $\pm 0.05$ % or $\pm 3$ mV *)
Static internal resistance	: 50 m $\Omega$ max. *)
Dynamic internal resistor	: With        100 Hz - 20 m $\Omega$ max. 1000 Hz - 20 m $\Omega$ max. 10.000 Hz - 30 m $\Omega$ max. 100.000 Hz - 200 m $\Omega$ max. 250.000 Hz - 200 m $\Omega$ max.
Rise time	: 25 $\mu$ sec. max.

\*) Including "Short term drift".

Ripple voltage	: 200 $\mu$ V r.m.s. max.
Temperature coefficient	: smaller than 0.02 % or 1 mV per $^{\circ}$ C
<u>Use as current stabiliser</u>	
Current	: 0-400 mA
Stability	: With mains voltage variations of + or -10 % smaller than 0.5 % or 0.5 mA *) With load variations 3 mA max.
Ripple current	: 300 $\mu$ A r.m.s. max.
Temperature coefficient	: 0.4 mA max. per $^{\circ}$ C

## II. PUTTING INTO OPERATION

### A. ADJUSTING ON LOCAL MAINS VOLTAGE

The instrument is adjusted on 220 V on delivery.  
For adjustment on 110, 125 or 235 V, see Fig. 2.

### B. CONNECTION

#### 1. Earth

The instrument is earthed via:

- a. Rim earthing of mains flex.
- b. Earth screw on the rear of the instrument.
- c. Earth terminal (  $\equiv$  ) on the front of the instrument. The circuit to be supplied can also be earthed via this earth terminal.

#### 2. Connect the instrument to the mains via the mains flex

\*) Including "short term drift".

### 3. The output voltage is taken from terminals + and - on the front

Series or parallel connection of several instruments is possible.

With parallel connection, adjust the instruments on the same output voltage.

## C. COOLING

Before the instrument is switched on it is necessary to check whether the cooling is not obstructed.

## D. CONTROL

1. The instrument is switched on by pulling out knob "I".
2. The output voltage can be adjusted with knob "U". The output voltage can be read off the meter by pulling out knob "U".  
The output current is indicated when knob "U" is pressed in.
3. The current limitation can be adjusted with knob "I". If the instrument is overloaded or short-circuited, the current will be limited on the set value and the output voltage will drop.

## E. REMOTE CONTROL

The unit can be made suitable for remote voltage- and current control (programming).

The voltage can be set by means of a variable resistor or an adjustable voltage.

The current can be set with a variable resistor.

To suppress interference voltages, the wires between control and unit have to be twisted or screened.

For connections to print, see Fig. 3.

### 1. Voltage adjustment with variable resistor.

Turn voltage potentiometer (R1) fully clockwise.

There are now two possibilities:

- a. Remove resistors R63 and R64 (between terminals U). Connect a variable resistor of max. 30 kohm (0.25 W) to the terminals U.  
The voltage is 1 V/kohm.

N.B. Switch without interruption; if the connection between terminals U is open, the output voltage exceeds 30 V.

- b. Do not remove resistors R63 and R64. Connect a variable resistor to terminals U.
2. Voltage adjustment, using a voltage.  
Connect a variable voltage 0-35 V $\overline{---}$  (minimum 10 mA) in series with 3 kohm (1 W) to terminals U. Note the polarity; see Fig. 3.
3. Current adjustment with variable resistor.  
Turn the current potentiometer (R2) fully clockwise.  
Remove resistors R49 and R51 (between terminals I).  
Connect a variable resistor 15 kohm - 0.5 Mohm to terminals I.  
Do not short-circuit terminals I.  
If the maximum current cannot be adjusted, reduce 15 kohm.  
With very small currents, use a resistor larger than 0.5 Mohm, if required.



Fig. 1

