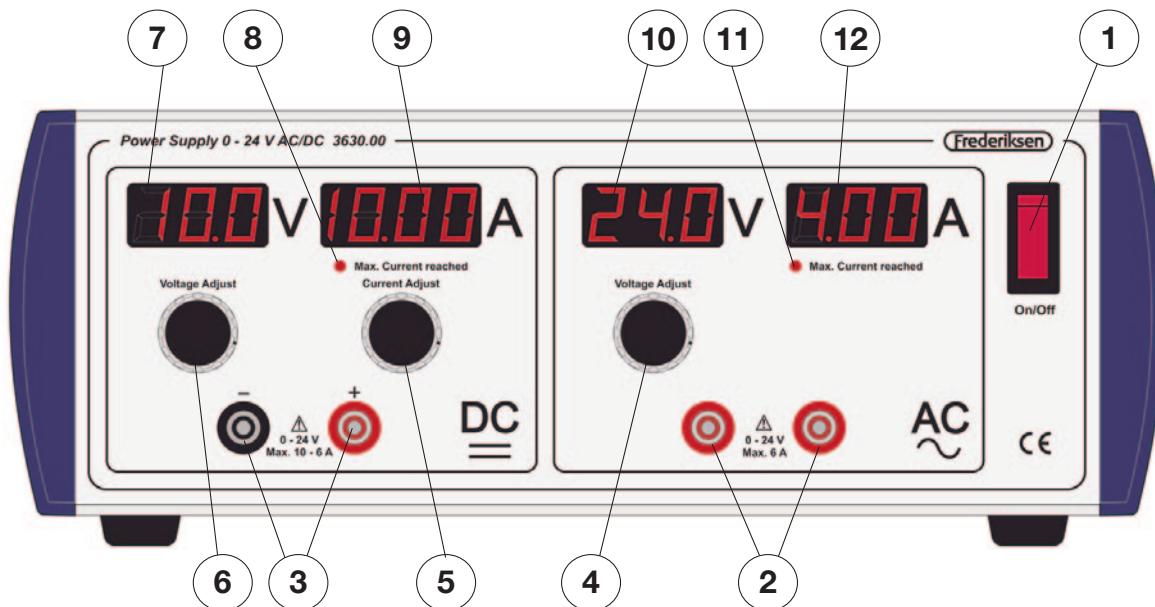


# Manual for Power Supply 3630.00

06.06.12

Ae 3630.00



This power supply has been designed specifically for use in teaching physics, chemistry and other science subjects. The power supply can provide both direct current (DC) and alternating current (AC). The power supply can provide both types of electrical power at the same time, and they can be adjusted independently of one another. Separate displays are provided for DC and AC output.

## Safety

The power supply is of the switched mode type, and it adheres to the EN-61558-1 standard. The connection jacks are safety-type 4 mm banana plug connectors and are well-suited for use with students. The connectors will also accept leads with ordinary banana plugs. The apparatus is CE marked and approved.

A power cord with ground is provided with the apparatus. The apparatus must be connected to a power outlet with ground.

Under extreme conditions, which will rarely occur under normal use (high temperature combined with high loading for a long period of time), the power supply will automatically shut down when a given

internal temperature is reached. The power supply will turn itself on again, when it has cooled off.

## Important !

**Never connect two power supply outlets in parallel.** This applies whether the outlets belong to the same apparatus or to separate units.

## Operation

The power supply is connected to the power outlet 230 VAC, 50 Hz (115V 50/60 Hz) using the power cord which is provided.

The apparatus must be connected to a power outlet with ground.

The control panel is divided into two sections:

The DC-controls are to the left, the AC-controls are to the right. Each section operates independently of the other.

The numbered items on the control panel (see illustration) correspond to the following functions:

1) On/off switch with lamp

2) Connection jacks for AC

3) Connection jacks for DC

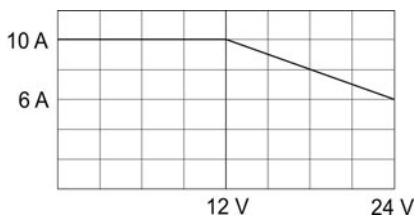
4) Regulating knob for AC

5) Regulating knob for the DC current limiter.

If a current limit is to be set, proceed as follows:  
Adjust the voltage adjustment knob (6) to the desired voltage. Short circuit the DC output connectors with a test lead. Use the current adjustment knob (5) to adjust the maximum current desired. Remove the short circuit again.

The current is now prevented from exceeding this value, regardless of the position of the voltage regulating knob (6).

The maximum current which can be supplied is shown on the following graph:



6) Regulating knob for DC voltage

7) Display showing the DC output voltage

8) LED (light emitting diode) indicator showing whether the maximum current limit setting has been reached. When the maximum current is being drawn (cf. adjustment knob (5)), then the LED will light up.

9) Display showing the DC output current

10) Display showing the AC output voltage

11) LED indicating whether or not the maximum value of the current has been reached (LED lights up).

12) Display showing the AC output current

#### Maintenance:

No special maintenance of the power supply is necessary.

#### Service:

The power supply should only be serviced by qualified personnel. During the guarantee period, only personnel approved by Frederiksen A/S may perform service repairs.

#### Technical data:

##### 230 V version:

Input voltage: 200 - 242 volts, 50 Hz

Input current: 1.4 amperes

Fuses: 2 ea. 3.15 AT  
(no. 4090.15)

Power consumption: 320 watts

##### 115 V version:

Input voltage: 100 - 121 volts, 50/60 Hz

Input current: 2.8 amperes

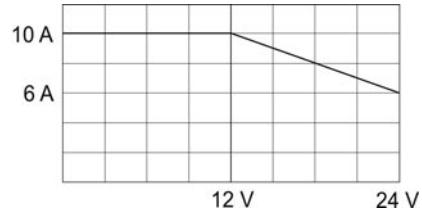
Fuses: 2 ea. 6.3 AT  
(no. 4090.09)

Power consumption: 320 watts

#### DC:

Output voltage

continuously adjustable: 0-24 volts  
output current (0-12 volts): 0-10 amperes  
output current (12-24 volts): 0-10/6 amperes  
linearly decreasing as shown



Overload protection: Electronic

Ripple and noise: < 25 mV pp

Digital displays: 1% +/- 2 LSD

#### AC:

Output voltage

continuously adjustable: 0-24 volts  
Output current: 0-6 amperes  
Overload protection: Electronic  
Digital displays: 2% +/- 2 LSD  
Size: 312 x 225 x 117 mm  
Weight: 2.5 kilograms