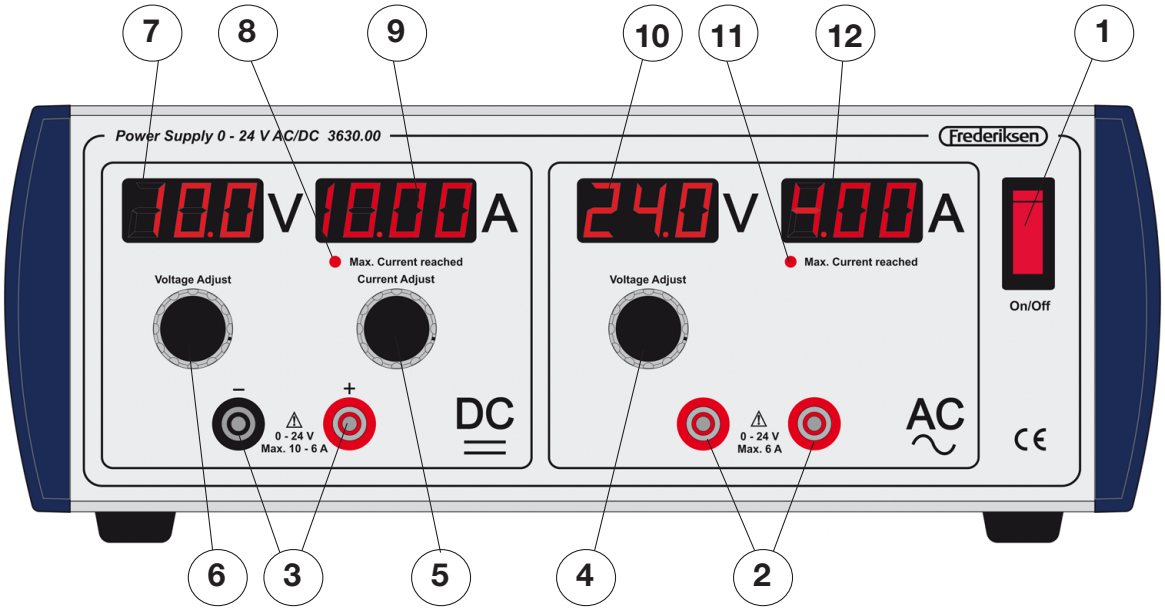
Manual for Power Supply 3630.00

2014-03-27 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 (115 V 50/60 Hz) using the power cord which is provided.
The apparatus must be connected to a power outlet with ground.

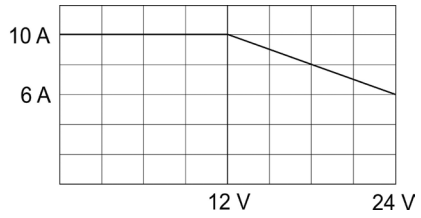
The control panel is divided into two sections:

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:

A/S Søren Frederiksen, Ølgod
Viaduktvej 35 · DK-6870 Ølgod
Tel. +45 7524 4966
Fax +45 7524 6282
info@frederiksen.eu
www.frederiksen.eu

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:

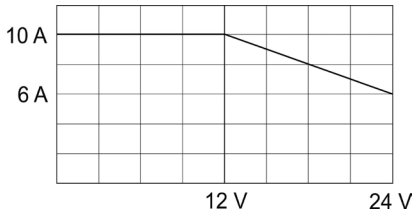
Input voltage:	200 - 242 volts, 50 Hz
Input current:	1.4 amperes
Fuse:	3.15 AT (no. 4090.15)
Power consumption:	320 watts

115 V version:

Input voltage:	100 - 121 volts, 50/60 Hz
Input current:	2.8 amperes
Fuse:	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