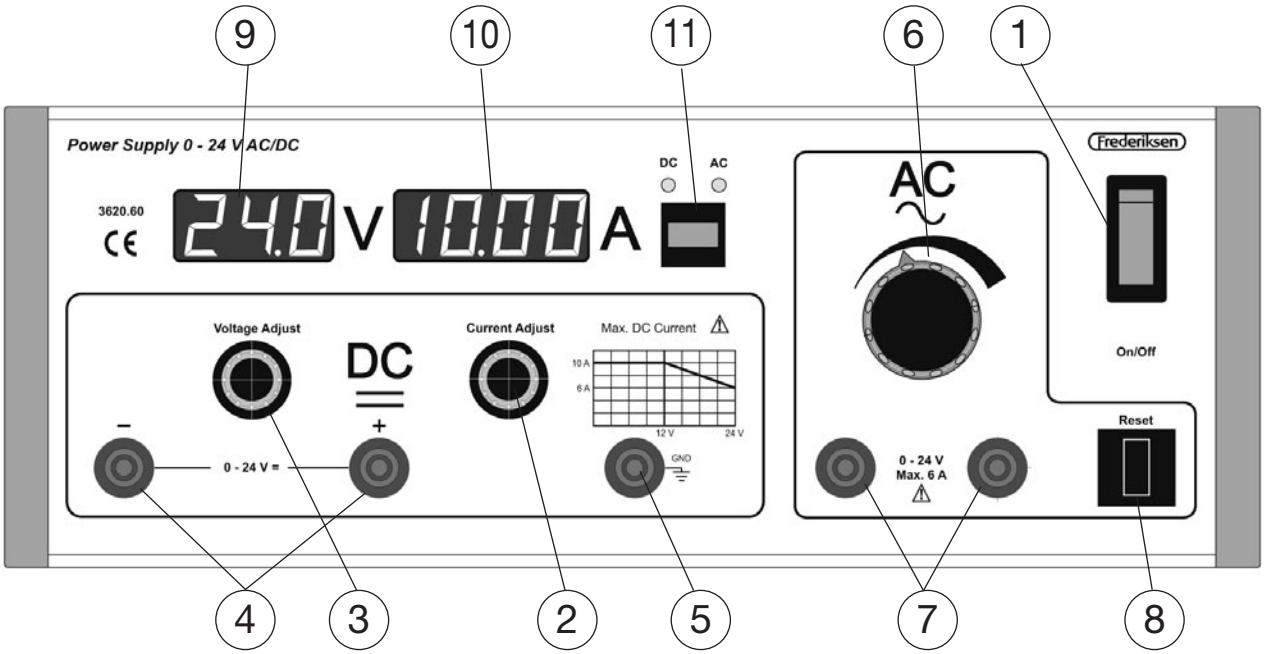
Manual for Power Supply no. 3620.63

16.12.10 Ae 3620.63



Description

This laboratory power supply can supply both direct and alternating current from 0 to 24 volts. The AC and DC sections are galvanically separated and can both be used at the same time. The supply adheres to CE-standards and is supplied with a safety transformer fulfilling EN 60742, and provided that a power cable with ground is used is a SELV/PELV power supply.

The direct current section is designed as a switched mode voltage regulator with the advantage of very low power loss due to heat. This section yields a maximum of 10 amperes up to 12 volts. The maximum current output then falls off linearly to 6 A at 24 V. Both current and voltage can be varied continuously.

The alternating current section is based upon an ordinary turn-transformer which ensures that the AC output has the same frequency as the AC line input. The AC section supplies up to 6 A, and the voltage can be regulated continously.

Both the DC and the AC sections are overload protected.

WARNING

The power supply is provided with a power cord with a ground connection. For safety reasons the supply should always be connected to a power outlet with a ground connection for the plug. The apparatus should only be opened for servicing by qualified service personnel.

Operation

The power supply should be connected to the mains power supply by means of the grounded power cord which is supplied.

Pos. 1:

The mains power switch has a built in light to indicate that the power is turned on.

Note that the front panel of the power supply is divided into three sections: a framed area for the DC section, a framed area for the AC section and a readout area for the DC section.

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Direct current section (DC):

Note that it is not the readout voltage which determines the maximum current draw for the power supply, but the mechanical adjustment of the current and voltage regulating knobs (see items 2 and 3).

Pos. 2:

Adjustable current limiter. Up to 10 A may be drawn from the power supply in the 0-12 V range and from 10 to 6 A linearly declining in the 12-24 V range. Limiting the max. current drawn may be done implementing the following procedure. Set the voltage adjust knob (pos 3) to the desired voltage. Short-circuit the two output terminals (pos. 4) by means of a test lead, then set the adjustable current limiter (pos. 2) to the desired max. current.

Pos. 3:

Voltage adjust knob. Continuously adjustable in the 0-24 V range.

Pos. 4:

Terminals for DC output.

Pos.5:

Grounded terminal- connected to the power supply cabinet.

AC output:

The voltage will inevitable drop 1-2 V below the specified level when the max. possible current is drawn.

Pos. 6:

AC voltage adjust knob. Continuously adjustable in the 0-24 V range.

Pos. 7:

Terminals for AC output.

Pos. 8:

Automatic thermal cut-out. Max. 6 A can be drawn from the power supply
Automatically activated in case of overload. Wait approx. 40 sec. then depress the button and continue.

The display section:

Pos.9:

Digital display for monitoring voltage. Displayed with 1 decimal point, with the symbol (V) located to the right of the digits.

Pos. 10:

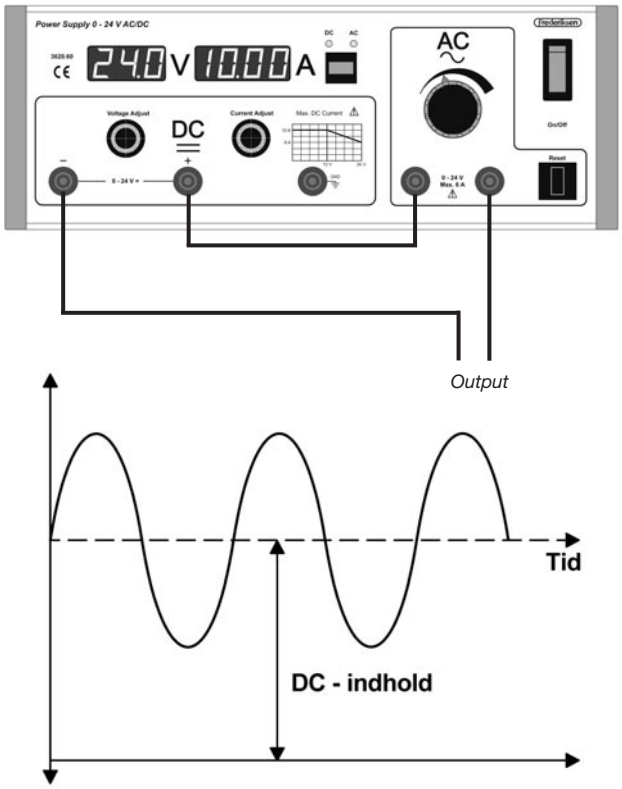
Digital display for monitoring current. Displayed with 2 decimal points, with the symbol (A) located to the right of the digits.

Pos.11:

Selector for monitoring voltage and current in either the DC or the AC mode. The chosen mode is indicated by a LED.

Elevated AC-level:

If the power supply is connected to the load as shown in the illustration below, then the zero-level will be raised to a higher level. The zero-level position can be adjusted by means of the DC voltage output knob, while the amplitude of the AC signal can be adjusted using the AC voltage output knob. If a function generator type 2501.50 is connected instead of the AC section as shown here, then an elevated AC level with variable frequency can be achieved.



Technical data:

Mains supply (115 V):	117 V ± 10%, 50 Hz
Mains current (115 V):	2.6 A
Fuse rating:	2 psc. 4 A slow (no. 4090.06)
Overload protection:	Automatic thermal cut-out, activated at 120 °C.
Max. power consumption:	350 W
DC:	
Output voltage:	0-24 V, continuously adjustable
Output current (0-12 V):	0-10 A
Output current (12-24 V):	10 A linearly declining to 6 A.
Overload protection:	Electronically
Ripple and noise:	< 25 mVpp
Digital read-out:	1% ± 2 LSD
AC:	
Output voltage:	0-24 V, continuously adjustable
Output current:	0-6 A
Overload protection:	6 A automatic thermal cut-out.
Digital read-out:	2% ± 2 LSD
Dimensions:	297 x 225 x 118 mm
Weight:	8.1 kg

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