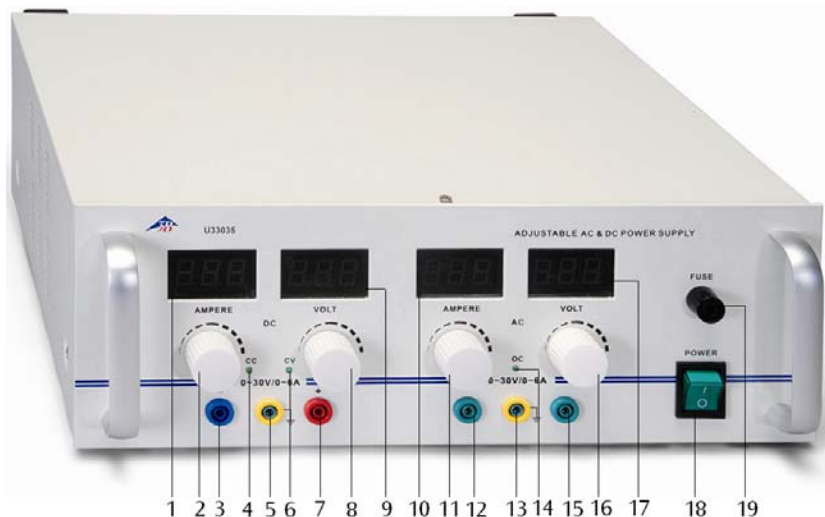


AC/DC Power Supply 0 - 30 V, 6 A (115 V, 50/60 Hz) AC/DC Power Supply 0 - 30 V, 6 A (230 V, 50/60 Hz)

1008692 (115 V, 50/60 Hz)
1003593 (230 V, 50/60 Hz)

Instruction sheet

03/12 ALF



- 1 Display DC current
- 2 Current regulator DC
- 3 DC voltage output -
- 4 LED constant voltage source (CC)
- 5 Earthing socket
- 6 LED constant current source (CV)
- 7 DC voltage output +
- 8 Voltage regulator DC
- 9 Display DC voltage
- 10 Display AC current
- 11 Current regulator AC
- 12 AC voltage output
- 13 Earthing socket
- 14 Overcurrent indicator (LED)
- 15 AC voltage output
- 16 Voltage regulator AC
- 17 Display AC voltage
- 18 Mains on/off switch
- 19 Fuse holder

1. Safety instructions

The AC/DC Power Supply 0 - 30 V, 6 A conforms to all safety regulations for electrical measuring, control, monitoring and laboratory equipment, as specified under DIN EN 61010, Section 1, and the equipment has been designed to meet protection class I. It is intended for operation in a dry environment, suitable for the operation of electrical equipment and systems.

Safe operation of the equipment is guaranteed, provided it is used correctly. However, there is no guarantee of safety if the equipment is used in an improper or careless manner.

If it may be assumed for any reason that non-hazardous operation will not be possible (e.g. visible damage), the equipment should be switched off immediately and secured against any unintended use.

In schools and other educational institutions, the operation of the power supply unit must be supervised by qualified personnel.



Caution: the low-voltage output of the power supply is not surge-proof if exposed to external voltages of more than 100 V with respect to earth.

- When using the equipment in conjunction with other power supplies, e.g. for operating electron tubes, be careful that no voltages in excess of 100 V with respect to earth are present at the outputs.
- Before using the power supply unit for the first time, confirm that the specifications printed on the rear side of the housing are compatible with the local mains voltage.
- Before using the power supply unit, check the housing and the mains lead for any damage. In the event of any malfunction/operational defect or visible damage, switch off the unit immediately and secure it against unintended use.
- The instrument may only be connected to the mains via a socket that has an earth connection.
- Before making any connections, check the experiment leads for damaged insulation and exposed wires.
- Any changes to the circuit may only be made with the power supply switched off.
- Replace a faulty fuse only with one matching the specifications stated at the rear of the housing.
- Disconnect the equipment from the mains before replacing a fuse.
- Never short the fuse or the fuse holder.

- Never cover the ventilation slots in the housing. This is necessary in order to ensure sufficient circulation of air required for cooling the internal components of the equipment.
- Do not place the power supply unit on damp or wet surfaces.
- Do not subject the power supply unit to extreme humidity or dampness and extreme temperatures (direct sunlight), shocks or strong vibrations.
- The equipment may only be opened/repaired by qualified and trained personnel.

2. Description

The AC/DC Power Supply 0 - 30 V, 6 A provides AC and DC voltages up to 30 V with a current up to 6 A.

The unit may be used as constant voltage supply with current limiting or as constant current source with voltage limitation for DC outputs. The AC output is equipped with a current limiter.

The AC and DC output voltages and currents are continuously adjustable and are tapped from the corresponding output sockets. The unit is equipped with separate digital volt- and ammeters (3 digits LCDs). Cooling of the internal components is provided by a ventilator. The DC voltage is stabilised. The AC and DC outputs are electrically isolated from each other, and have short-circuit protection.

The 1008692 AC/DC power supply is for operation with a mains voltage of 115 V ($\pm 10\%$), and the 1003593 unit is for operation with a mains voltage of 230 V ($\pm 10\%$).

3. Technical data

DC output:

Voltage:	0 – 30 V, continuously adjustable
Current:	0 – 6 A
Ripple & noise:	CV 1 mVrms, CC 3 mArms
Display accuracy:	Voltmeter $\pm (0,2\% + 2 \text{ digits})$ Ammeter $\pm (1\% + 2 \text{ digits})$

AC output:

Voltage:	0 – 30 V, continuously adjustable
Current:	0 – 6 A
Display accuracy:	Voltmeter $\pm (1\% + 2 \text{ digits})$ Ammeter $\pm (1\% + 2 \text{ digits})$
Mains voltage:	220 V – 240 V AC $\pm 10\%$
Terminals:	4 mm safety sockets
Dimensions:	380 x 140 x 300 mm ³
Weight:	12 kg approx.

4. Operation

4.1 Obtaining a DC voltage

Used as a constant voltage source (CV) in general the current regulator (CC) should be set to maximum.

To set the current limiting protection point:

- Switch on the power supply and turn the current regulator (CC) counter clockwise to minimum.
- Short circuit the positive and negative output sockets and rotate the current regulator (CC) clockwise until the output current equals the required current limiting value.

4.1.1 Using the power supply as a constant voltage source (CV)

- Turn the current regulator (CC) clockwise to maximum.
- Switch on the power supply and adjust the voltage to the required value by turning the voltage regulator (CV). The CC-LED goes out and the CV-LED lights up.
- Switch off the power supply.
- Connect the load to the DC output sockets and turn on the power supply again.

4.1.2 Using the power supply as a constant current source (CC)

- Switch on the power supply and turn the voltage regulator (CV) to maximum.
- Turn the current regulator (CC) counter clockwise to minimum.
- Connect the load to the DC output sockets and set the required current value by turning the current regulator (CC) clockwise. The CV-LED goes out and the CC-LED lights up.

4.2 Obtaining an AC voltage

- Switch on the power supply and turn the current regulator clockwise to maximum.
- Adjust the voltage to the required value by turning the voltage regulator.
- Switch off the power supply.
- Connect the load to the AC output sockets and turn on the power supply again.

Alternatively:

- Switch on the power supply and turn the voltage regulator clockwise to maximum.
- Turn the current regulator counter clockwise to minimum.
- Switch off the power supply.
- Connect the load to the AC output sockets and turn on the power supply again.
- Adjust the current to the required value by turning the current regulator.

The power supply automatically will switch off, if the current exceeds the set value and the OC LED lights up. The power supply turns on after a short period and will switch off again, if no corrective measures are taken. In this case set a higher current limit or lower the voltage.

4.3 Changing the fuse

- Turn off the power switch and unplug the mains plug.
- Unscrew the fuse holder with a screwdriver.
- Replace the fuse and reinsert the holder in its socket.

5. Care and maintenance

- Before cleaning the equipment, disconnect it from its power supply.
- Use a soft, damp cloth to clean it.

6. Disposal

- The packaging should be disposed of at local recycling points.
- Should you need to dispose of the equipment itself, never throw it away in normal domestic waste. Local regulations for the disposal of electrical equipment will apply.

