

## Product Datasheet - Technical Specifications



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# PeakTech®

## Prüf- und Messtechnik

 Spitzentechnologie, die überzeugt



**PeakTech® 5995**

**Bedienungsanleitung /  
operation manual**

**Digitales AC/DC-Labornetzgerät /  
Digital AC/DC-power supply**

# 1. Safety Precautions

This product complies with the requirements of the following European Community Directives: 2004/108/EC (Electromagnetic Compatibility) and 2006/95/EC (Low Voltage) as amended by 2004/22/EC (CE-Marking).

To ensure safe operation of the equipment and eliminate the danger of serious injury due to short-circuits (arcing), the following safety precautions must be observed.

Damages resulting from failure to observe these safety precautions are exempt from any legal claims whatever.

- \* Caution! Do not switch-on the unit if the case is dented.
- \* Prior to connection of the equipment to the main outlet, check that the available mains voltage corresponds to the voltage setting of the equipment.
- \* Do not exceed the maximum permissible input ratings (danger of serious injury and/or destruction of the equipment).
- \* Replace a defective fuse only with a fuse of the original rating. Never short-circuit fuse or fuse holding.
- \* Check test leads and probes for faulty insulation or bare wires before connection to the equipment.
- \* Use caution when working with voltages above 35V DC or 25V AC. These Voltages pose shock hazard.
- \* To avoid electric shock, do not operate this product in wet or damp conditions. Conduct measuring works only in dry clothing and rubber shoes, i. e. on isolating mats.
- \* Comply with the warning labels and other info on the equipment.
- \* Do not subject the equipment to direct sunlight or extreme temperatures, humidity or dampness.
- \* Do not cover the ventilation slots of the cabinet to ensure that the air is able to circulate freely inside.
- \* Do not insert metal objects into the equipment by way of the ventilation slots.
- \* Do not place water-filled containers on the equipment (danger of short-circuit in case of knock over the container)
- \* Do not subject the equipment to shocks or strong vibrations.
- \* Do not operate the equipment near strong magnetic fields (motors, transformers etc.).
- \* Keep hot soldering irons or guns away from the equipment.
- \* Allow the equipment to stabilize at room temperature before taking up measurement (important for exact measurements).

- \* Periodically wipe the cabinet with a damp cloth and mild detergent. Do not use abrasives or solvents.
- \* Do not store the meter in a place of explosive, inflammable substances. The instrument must be set up so that the power plug can be removed from the socket easily.
- \* Do not modify the equipment in any way
- \* Opening the equipment and service – and repair work must only be performed by qualified service personnel
- \* Do not use this instrument for high-energy industrial installation measurement.
- \* **Measuring instruments don't belong to children hands.**

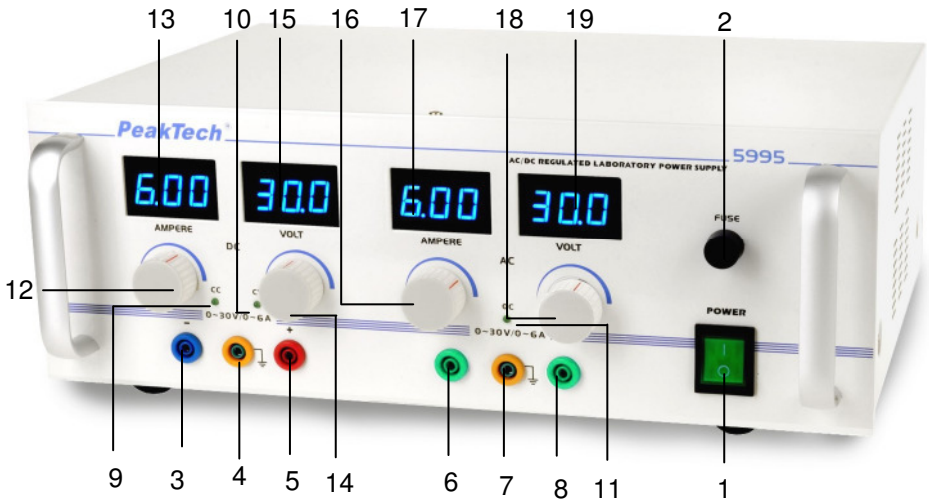
### **Cleaning the cabinet**

Prior to cleaning the cabinet, withdraw the mains plug from the power outlet. Clean only with a damp, soft cloth and a commercially available mild household cleaner. Ensure that no water gets inside the equipment to prevent possible shorts and damage to the equipment.

## 2. Specifications

<b>DC-output</b>		
Output voltage	0 - 30V	
Output current	0 - 6A	
Line Regulation	Voltage output	$1 \times 10^{-4} + 3 \text{mV}$
	Current output	$2 \times 10^{-3} + 3 \text{mA}$
Load Regulation	Voltage output	$1 \times 10^{-4} + 5 \text{mV}$
	Current output	$2 \times 10^{-3} + 5 \text{mA}$
Ripple & Noise	Voltage output: 1mVrms Current output: 3mA <sub>rms</sub>	
Display accuracy	DC V: +/-0.2% rdg. + 2 dgt.. DC A: +/-1.0% rdg. + 2 dgt.	
<b>AC output</b>		
Max. Voltage	0 – 30V	
Max. Current	0 - 6A	
Display accuracy	AC V: +/-1.0% rdg. + 2 dgt. AC A: +/-1.0% rdg. + 2 dgt.	
<b>General datas</b>		
Input voltage	222-240V AC +/-10%	
Fuse	4A / 250V F ; 5x20mm	
Dimensions (BxHxW)	380 x 140 x 350mm	
Weight	12 kg	
Accessories	Power cable and instruction manual	

### 3. Front Panel Controls



1. Power switch: the LED illuminates when the power is „ON“
2. Fuse holder for the unit
3. DC output terminal (-): connecting the negative terminal of DC load
4. Case ground: connecting the case to the ground
5. DC output terminal (+): connecting the positive terminal of DC load
6. AC output terminal: connecting the AC load
7. Case ground: connecting the case to the ground
8. AC output terminal: connecting the AC load
9. Constant-current indicator: the LED illuminates when the DC output is in current-regulated state
10. Constant-voltage indicator: the LED illuminates when the DC output is in voltage-regulated state
11. Over current indicator: the LED illuminates when the AC output is over current
12. DC constant current adjustment: adjusting DC output current value (adjusting the current-limited protection point)
13. DC Amp display: indicating DC output current by LED
14. DC constant voltage adjustment: adjusting DC output voltage
15. DC Voltage display: indicating DC output voltage by LED
16. AC current adjustment: adjusting AC output current by LED
17. AC Amp display: indicating AC output current by LED
18. AC voltage adjustment: adjusting AC output voltage
19. AC Voltage display: Indicating AC output voltage by LED

## 4. Precautions for using the power supply



**Caution !** Before connecting the mains plugs of the power supply to the main outlet and switching on the equipment, be sure that the correct main voltage is available and polarity has been correctly observed. Incorrect polarity can damage the power supply and/or any connected equipment. Replace defective fuse only by an equivalent type. Before inserting the mains plug in the power outlet ensure that the line voltage corresponds with the selected line voltage of the power supplies.

**Caution!** Never use the instrument without fully closed housing.

### 4.1. Adjustment of output current (DC)

**Caution!** Before connecting this power supply to the load ensure that the specified maximum output current is not exceeded.

1. Disconnect the leads from the plus (+) and minus (-) terminals or the AC terminals of the power supply.
2. Adjust the desired output voltage with the voltage control.
3. Turn the current control counter-clockwise.
4. Short-circuit the plus and minus output terminals with a suitable short-circuit bridge or cable (the bridge or cable must be adequately dimensioned for the desired output current).

**Caution!** Only possible in DC-voltage range. Short-circuit at AC-voltage range activates input-fuse.

5. Turn the current control clockwise until the desired current is indicated.
6. Remove the short-circuit bridge or cable from the plus and minus terminals.
7. The power supply is ready for operation now.

### 4.2. Operating method

1. To adjust the desired output voltage (0...30V), first should rotate clockwise the adjustment knob (12) to maximum, then turn on power switch (1).
2. Adjust adjustment knob (14) till output voltage reach required voltage value.
3. The LED for constant current (CC) expires and the LED for constant voltage (CV) lights up.

**Caution:**

This unit has excellent protection function. The adjustable output has current-limit protection. As there is controlling circuit for regulating transistor's power loss in the circuit, when short-circuit occurs, the power loss on large power transistors is not very high, it can't cause any damage to the unit. But there is still power loss when short-circuit, in order to reduce aging and energy consumption, so this situation should be find as soon as possible and turn off power, then exclude the faults.

When operating is finished, put it in a dry place of good ventilation, and keep it clean. If it is not in use for a long period, pull off the power supply plug for storage.

For maintenance, input voltage must be cut off.

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*This manual considers the latest technical knowing. Technical changings which are in the interest of progress reserved.*

*We herewith confirm, that the units are calibrated by the factory according to the specifications as per the technical specifications.*

*We recommend to calibrate the unit again, after one year.*