PeakTech®
5 A Laboratory Switching Mode Power Supply

PeakTech 5 A Laboratory Switching Mode Power Supply Instruction Manual

Contents

PeakTech®

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Product Information

- **Product Name:** Laboratory Switching Mode Power Supply
- **Electrical Safety:** Complies with industry standards
- **Operating Environment:** Laboratory setting

Product Usage Instructions

- **Electrical Safety**
  Ensure the power supply is connected to a grounded outlet and follows all safety guidelines provided in the user manual.
- **Operating Environment**
  Use the power supply in a laboratory setting with stable temperature and humidity levels to ensure optimal performance.
- **Maintenance and Care**
  Regularly clean the power supply using a dry cloth to remove dust and debris. Avoid exposing the unit to liquids or extreme temperatures.

Technical Specifications

- **Power Supply:** Switching Mode
- **Voltage:** Refer to the user manual for specific details

Frequently Asked Questions (FAQ)

- **Q: Can I use the power supply in a non-laboratory setting?**
  A: It is recommended to use the power supply in a laboratory setting to ensure accurate and safe operation.
- **Q: How often should I perform maintenance on the power supply?**
  A: Regular maintenance is recommended to keep the power supply functioning optimally. Clean the unit periodically and refer to the user manual for specific maintenance guidelines.

Safety Precautions

- This product complies with the requirements of the following directives of the European Union for CE conformity: 2014/30/EU (electromagnetic compatibility), 2014/35/EU (low voltage), 2011/65/EU (RoHS).
- To ensure the 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.

General:

- Read these operating instructions carefully and make them available to subsequent users.
- Always observe the warning notices on the device; do not cover or remove them.
- Pay attention to the use of the device and only use it in its appropriate overvoltage category.
- Familiarize yourself with the functions of the device and its accessories before using it for the first time.
- Do not operate the device unattended or only when it is secured against unauthorized access.
- Only use the device for its intended purpose and pay particular attention to the warnings on the device and information on the maximum input values.
- Check that the device is functioning correctly before use, especially if the connected load has sensitive electronics.
- Always observe the applicable health and safety regulations and operating instructions!

Electrical safety:

- These devices are suitable for a mains voltage of 107 to 253V AC.
- The appliance must be positioned so that the main plug can be easily removed from the socket.
- Ventilation slots in the housing must be kept clear (risk of heat build-up inside the appliances if covered)
- Do not insert any conductors or other objects through the ventilation slots
- Do not place any liquids on the appliances (risk of short circuit if the container tips over).
- These laboratory power supply units are devices of protection class I with an earthed housing. Only use sockets with protective earth for connection and ensure that the connection cable is undamaged.
- Do not operate the appliance unattended or protect the device against unauthorized access
- Voltages above 25 VAC or 60 VDC are generally considered dangerous voltages.
- Work on dangerous voltages may only be carried out by or under the supervision of qualified personnel.
- Wear suitable protective equipment when working with dangerous voltages and observe the relevant safety rules.
- Do not exceed the maximum permissible input voltages under any circumstances (risk of serious injury and/or destruction of the device)
- Never touch the bare terminals when working with dangerous voltages during operation.

- Do not use several of these switching power supplies in parallel or series operation. Improper use can cause damage that is excluded from any warranty.

Measuring environment:

- These devices are only suitable for use in dry indoor areas and have no protection against dripping or splashing water.
- These devices are only suitable for use in dust-free indoor areas and use a fan for active ventilation and ventilation slots for cooling the interior. A dusty environment can cause dust to be sucked in and thus damage the device due to short circuits or insufficient cooling.
- Avoid any proximity to explosive and flammable substances, gases, and dust. An electrical spark could lead to an explosion or deflagration – danger to life!
- Do not carry out measurements in corrosive environments, the device could be damaged or contact points inside and outside the device could corrode.
- Avoid working in environments with high interference frequencies, high-energy circuits, or strong magnetic fields, as these can have a negative effect on the device.
- Avoid storage and use in extremely cold, damp, or hot environments, as well as prolonged exposure to direct sunlight.
- Avoid storage and operation in places with high, condensing humidity to prevent dripping water in the appliance.
- Before starting the measurement operation, the device should be stabilized to the ambient temperature (important when moving from cold to warm rooms and vice versa)

Maintenance and care:

- Never operate the appliance if it is not completely closed.
- Check the appliance and its accessories for damage to the insulation, cracks, kinks, and breakages before each use. If in doubt, do not use the appliance.
- Switch off the appliance before changing the fuse.
- Only replace defective fuses with a fuse corresponding to the original value. Never short-circuit the fuse or fuse holder.
- Maintenance and repair work on the appliance may only be carried out by qualified personnel.
- Clean the housing regularly with a damp cloth and a mild cleaning agent. Do not use corrosive abrasive cleaners.
- Do not make any technical changes to the appliance.

Attention!
Laboratory power supplies are not designed to charge batteries. Incorrect use can lead to serious damage to the device or the battery, which is excluded from claims of any kind.

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

Introduction

This switching power supply in modern design has been designed specifically for the service and education sectors. The four-digit LED display allows fast and accurate reading of the set values. The output voltage and current limit are hereby continuously in coarse and fine adjustment variables.

- Modern laboratory power supply in switch mode power supply technology
- 4-digit LED display for current and voltage
- Voltage and current preset
- output on and off
- Coarse (1V/100mA) and fine adjustment (10mV/1mA)
- Temperature-controlled fan
- constant current and short circuit protection
- 4mm safety sockets

Technical Data

- **Operation voltage:**
  - **P 6226:** 107 – 253 VAC; 50/60 Hz
  - **P 6225A:** 104 – 127 VAC / 207 – 253VAC; 50/60 Hz – switchable
- **Protection:** constant current and short-circuit protection
- **Display:** 2 x 4-digit blue LED (7-Segment)
- **Safety:** Protection Class 1; EN-61010-1
- **Dimensions:** (WxHxD) 80 x 160 x 260 mm
- **Weight:** 1,5 kg
- **Accessories:** Power cable and manual

PeakTech 6225A:

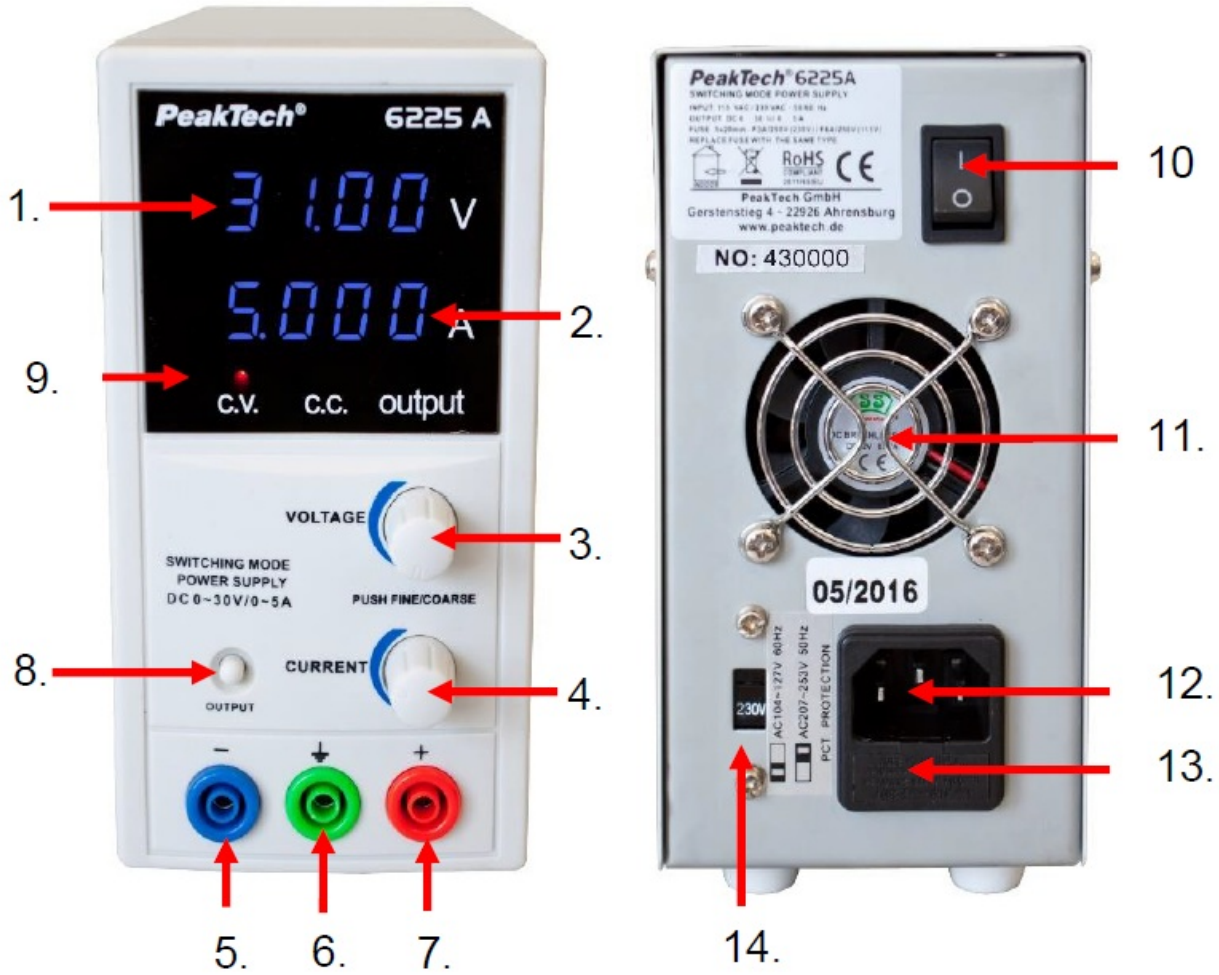
- **Output voltage:** 0 ~ 30 V DC
- **Output current:** 0 ~ 5 A DC
- **Line regulation:** ≤ 0,01% ± 1 mV ≤ 0,2% ± 1 mA
- **Load regulation:** ≤ 0,01% ± 5 mV ≤ 0,2% ± 5 mA
- **Ripple and noise:** ≤ 3 mV rms ≤ 3 mA rms
- **Voltage indication:** ± 0,5 % + 10 digits
- **Current indication:** ± 1,5 % + 25 digits

PeakTech 6226:

- **Output voltage:** 0 ~ 30 V DC
- **Output current:** 0 ~ 10 A DC
- **Line regulation:** ≤ 0,02% ± 5 mV ≤ 0,2% ± 1 mA
- **Load regulation:** ≤ 0,02% ± 10 mV ≤ 0,5% ± 10 mA
- **Ripple and noise:** ≤ 10 mV rms ≤ 10 mA rms
- **Voltage indication:** ± 0,5 % + 10 digits
- **Current indication (<5A):** ± 1,5 % + 25 digits
- **Current indication (≥5A):** ± 1,0 % + 5 digits

Operation

Controls and description of front-panel



Front:

1. Voltage indication
2. Current indication
3. Coarse/Fine adjustment of output voltage
4. Coarse/Fine adjustment of current
5. Negative output terminal
6. GND-Output (Connected to housing)
7. Positive output terminal
8. Output ON/OFF switch
9. C.V./C.C. and Output Indication

Rear:

10. ON/OFF Switch
11. Fan
12. Mains Socket
13. Fuse Holder
14. Voltage selector (P 6225A only)

Operating method

1. **Setting the constant voltage output:**
   Set the desired output voltage with the voltage knob (3). Press on the voltage knob, to select the desired digital point for coarse or fine adjustment. Once the desired voltage is set, turn on the output with the Output button (8). The C.V. and Output-LED indicate the voltage output.
2. **Current limitation/constant current output:**
   Set the desired current limitation when output is off with the current knob (4). Press the current knob to select the desired digital point for coarse or fine adjustment. Once the desired current is set, turn on the output with the Output button (8). The C.C. and output LEDs indicate an active current limitation.
   Note:
   The maximum output current is determined by the connected load. You can't charge a connected consumer with a higher power than it needs.
   PeakTech 6226: In current setting values under 9.9 A, the display will show X.XXX (1 mA resolution); when the setting value reaches or over 9.9 A, the display will show XX.XX (10mA resolution).
3. **Activate/deactivate key lock:**
   Once you have adjusted the desired settings, press and hold the voltage and current controls for 3 seconds to activate a key lock. Now only the output button is operable, but the voltage and current control can't be changed. Press both buttons again for 3 seconds to disable the key lock

Note

1. If the power supply cannot be turned on and the mains supply is turned on, the fuse of the laboratory power supply may be triggered. Turn on the laboratory power supply, unplug the power cord, and replace the fuse. Does the replacement of the fuse is not successful, maybe a defective in the device can be present. Consult your dealer to carry out an inspection.
2. If the output voltage in constant voltage mode is lower than the preset voltage and the CC indicator lights, the power supply has automatically switched to the constant current mode. Check the connected load or increase the output current.
3. If the output current in the constant current mode is lower than the preset current and the CV indicator lights, the power supply has automatically switched to the constant voltage mode. Check the connected load or increase the output voltage.
4. If the output voltage in constant voltage operation is not stable or jumps, it is probably because the mains supply voltage drops below 90% of the rated value. If the problem is not caused by the mains supply voltage, contact your dealer.

Safety Caution

1. The mains power must be switched off before servicing and servicing should be referred to a qualified person. The unit should be stored in a dry and well-ventilated place and the power cord removed if stored for long periods.
2. Laboratory Power Supplies are not designed for charging batteries. Any use of this type can cause serious damage to the device, which is exempt from any legal claims whatever.

3. Do not operate the device to power inductive loads, such as electric motors, which act as generators during overrun and thus can produce a reverse voltage.
4. Replace the fuse only with an identical fuse.
5. All rights, also for translation, reprinting, and copy of this manual or parts are reserved. Reproduction of all kinds (photocopy, microfilm, or other) only by written permission of the publisher.
6. This manual considers the latest technical knowledge. Technical changes which are in the interest of progress are reserved.
7. Misprints and errors are reserved.
8. We herewith confirm, that the units are calibrated by the factory according to the specifications as per the technical specifications.
9. We recommend calibrating the unit again, after one year.

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Documents / Resources

	PeakTech 5 A Laboratory Switching Mode Power Supply [pdf] Instruction Manual 6225 A, 6226, 6225 A Laboratory Switching Mode Power Supply, 6225 A, Laboratory Switching Mode Power Supply, Switching Mode Power Supply, Mode Power Supply, Power Supply, Supply

References

- User Manual