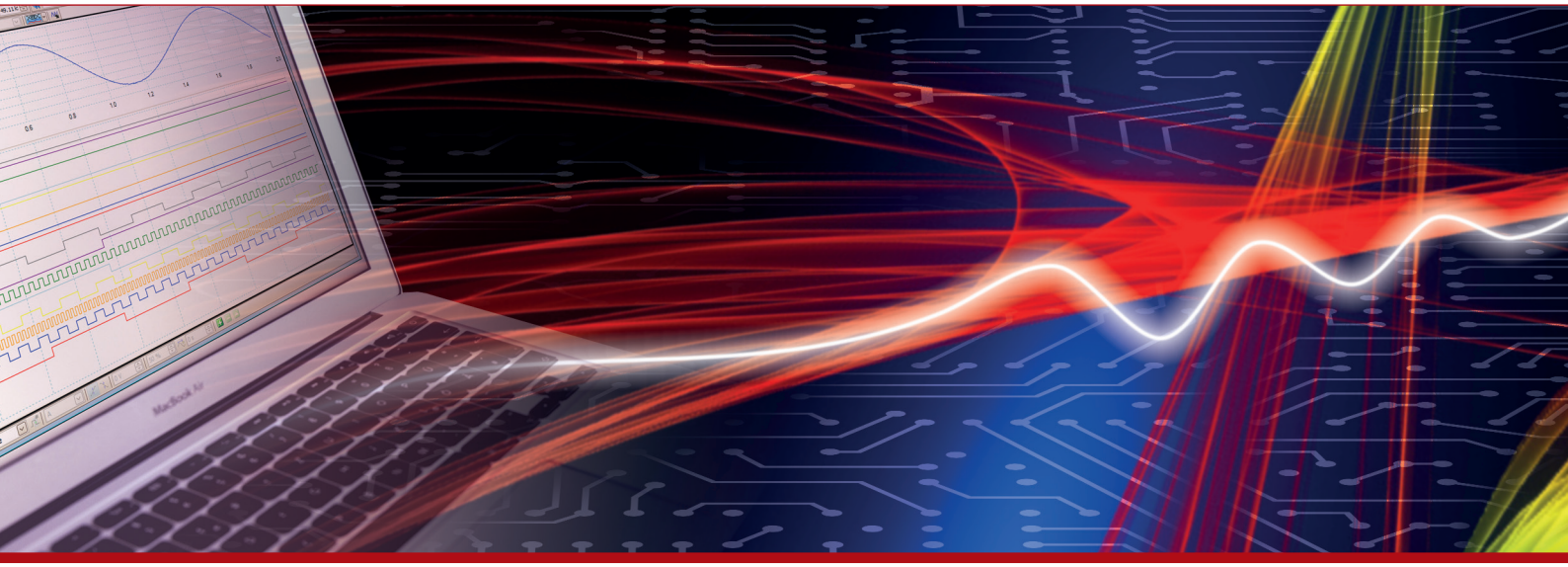
Product Datasheet - Technical Specifications



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PeakTech®

Prüf- und Messtechnik

Spitzentechnologie, die überzeugt

PeakTech® 2235

Bedienungsanleitung / Operation manual

Labor-Regeltrenntransformator / DC-Netzteil

Laboratory AC Power Source / DC Power Supply

1. Safety Precautions

This product complies with the requirements of the following European Community Directives: 2014/30/EU (Electromagnetic Compatibility) and 2014/35/EU (Low Voltage) as amended by 2014/32/EU (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 mid 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 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

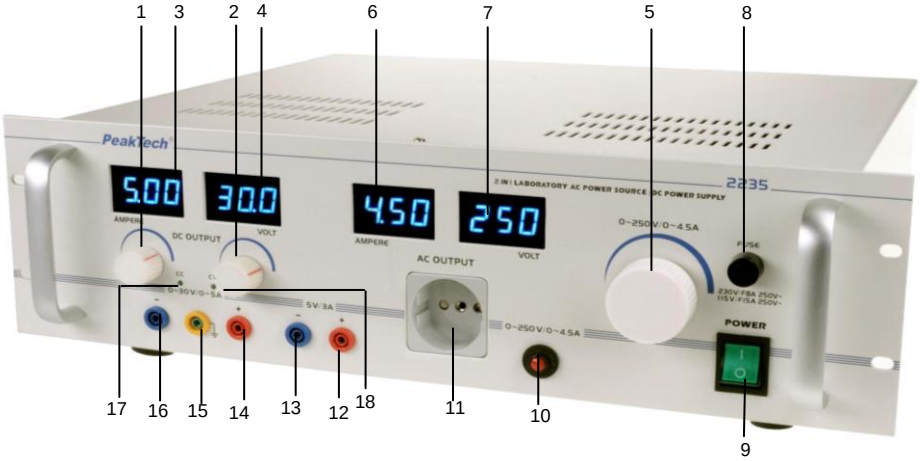
AC Power Source	
Max. Output power	1000 W
Max. Output current	4,5 A AC
Output voltage	0-250 V AC
Fuse	Input: 230 V / 50 Hz : 8 A / 250 V 115 V / 60 Hz : 15 A / 250 V Output: 5 A auto cut-off
DC Power Supply	
Output voltage	0 - 30 V DC; 5 V/3 A fixed
Output current	0 - 5 A DC
Residual ripple (U/I)	< 35 mVrms / 3 mArms
DC output Line Regulation Load Regulation	 CV 1×10-4+3mV CC2×10-3+3mA CV 1×10-4+5mV CC2×10-3+5mA Fixed output 10mV
Ripple & Noise	CV 1mVrms / CC 3mArms Fixed output 10 mV
Fixed Output Accuracy	2,5%
Accuracy of fixed output	2,5 %
Accuracy of Display	+/- 1,0 % + 2 dgt.
Operation voltage	110 ~127 V / 220 ~ 240 V AC ; 50/60 Hz – switchable
Dimensions (WxHxD)	19“ 3 HE-System housing, 482 x 140 x 430 mm (housing: 430 x 140 x 390 mm)
Weight	24 kg

Additional advice to isolating transformer

The PeakTech® 2235 is is developed and manufactured in protection class I, so the primary side has a protective earth connection of the housing, but without reference to the secondary side.
The secondary side of the isolating transformer is galvanically isolated from the primary side and outputs the voltage without additional smoothing or voltage conversion at the C-type outlet socket.

The principle of operation of an isolating transformer: Since the secondary-side voltage has no relation to the earth's potential, no faulty current can flow through the protective grounding or the primary-sides neutral conductor. This reduces the risk of electric shock and therefore a danger to the user is prevented.

3. Front panel controls



1.) DC constant current adjustment: adjusting DC output current value (adjust the current-limit protection point)
2.) DC constant voltage adjustment: adjusting DC output voltage
3.) DC Amp display: indicating output current by LED
4.) DC Voltage display: indicating output voltage by LED
5.) AC constant voltage adjustment: adjusting AC output voltage
6.) AC Amp display: indicating output current by LED.
7.) AC Voltage display: indicating output voltage by LED
8.) Fuse holder for the unit
9.) Power switch: the LED illuminates when the power is “ON”
10.) Fuse holder for the AC output
11.) Outlet AC adjustable voltage output (0~250V/4.5A)
12.) Fixed 5V output terminal (+): connecting the positive terminal of load
13.) Fixed 5V output terminal (-): connecting the negative terminal of load
14.) DC output terminal (+): connecting the positive terminal of load
15.) Case ground: connecting the case to the ground
16.) DC output terminal (-): connecting the negative terminal of load
17.) Constant Current Indicator (CC): the LED lights, if the output works in constant current mode
18.) Constant Voltage Indicator (CV): the LED lights, if the output works in constant voltage mode

4. Preparations for using the AC power source

Before inserting the mains plug in the power outlet ensure that the line voltage corresponds with the selected line voltage of the AC power source.

* Ensure that the mains fuse in the fuse holder is of the required rating (115 V AC / 230 V AC).

4.1. Selection of the required line voltage

The line voltage selector is placed on the rear of the instruments. Before switching to another line voltage, turn power off and remove the mains plugs from the outlet.

Remove the blank cover and switch the line voltage selector to the correct position (115 V AC or 230 V AC). Then close the back cover.

Caution ! Never use the instrument without fully closed housing!
For mounting in to 19“ Racks or laboratory tables: Take care that the distance of the inserted parts of the unit between the rack shut be considered when removing the upper and down part of the housing. Take care about safety protection class II.

4.2. Adjustment of output voltage

Caution ! Before connecting this power supply to the load ensure that the specified maximum output current is not exceeded. Further please consider that only one load is allowed to connect to the AC-power source.

1. Disconnect the power cord from the AC power source.
2. Adjust the desired output voltage with the voltage control.
3. The power supply is now ready for operation.

5. Caution

5.1. This unit has excellent protection function, 5 V output has reliable protection for current-limit and short. 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.

5.2. 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.

5.3. For maintenance, input voltage must be cut off.

6. Operating method

Using the adjustable DC output

6.1. When the adjustable output is used as CV output, first should rotate clockwise the CC adjustment (1) to maximum, then turn on power switch (9), adjust CV adjustment (2) till output voltage reaches required voltage value, at this time, the CC state indicator (17) goes out and the CV state indicator (18) lights on.

6.2. Used as CC output, after turning on power switch (9), first rotate clockwise the CV adjustment (2) and to maximum, while rotating counter clockwise the CC adjustment (1) to minimum, connect the required load, again adjust clockwise adjustment (1) till output current reaches the required current value. At this time, the CV state indicator (18) goes out and the CC state indicator (17) lights on.

6.3. Used as the CV output, in general the CC adjustment (2) and (17) should be set to maximum, but for this unit, the current-limiting protection point can also be set arbitrarily.
Setting procedure: turn on power, rotate counter-clockwise the CC adjustment (1) to minimum, then make the positive and negative output terminal in short connection and rotate clockwise the CC adjustment (1) till output current equals to the required current-limiting protection point, so that the current-limiting protection point is well set.

6.4. The LED display is in three digits. To get more accurate measuring value, you should calibrate by external circuit with precision measuring instrument.

Using the adjustable AC output

6.5. First turn on the power switch (9), adjust the AC voltage adjustment (5) to select the voltage, and then turn off the power switch (9). After inserting the import plug in the power outlet (11), turn on the power switch.

6.6. The LED display is in three digits. To get more accurate measuring value, you should calibrate by external circuit with precision measuring instrument.

6.7. The manual resumption switch (10) let the AC output has overloads protection function.

Using the fixed 5V/3A output

6.8. Connecting the terminal (12) (13) and turning on the power switch (9). The voltage is 5V and the current is 3A max.

Maintenance

If the AC power source does not function properly or becomes otherwise defective, return to your local dealer for repair.

Be sure to include a description with the equipment which shows the nature of the defect and the operation conditions that prevailed (adjusted voltage settings, output current, type of the load) when the defect occurred.

This manual is according 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 1 year.

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