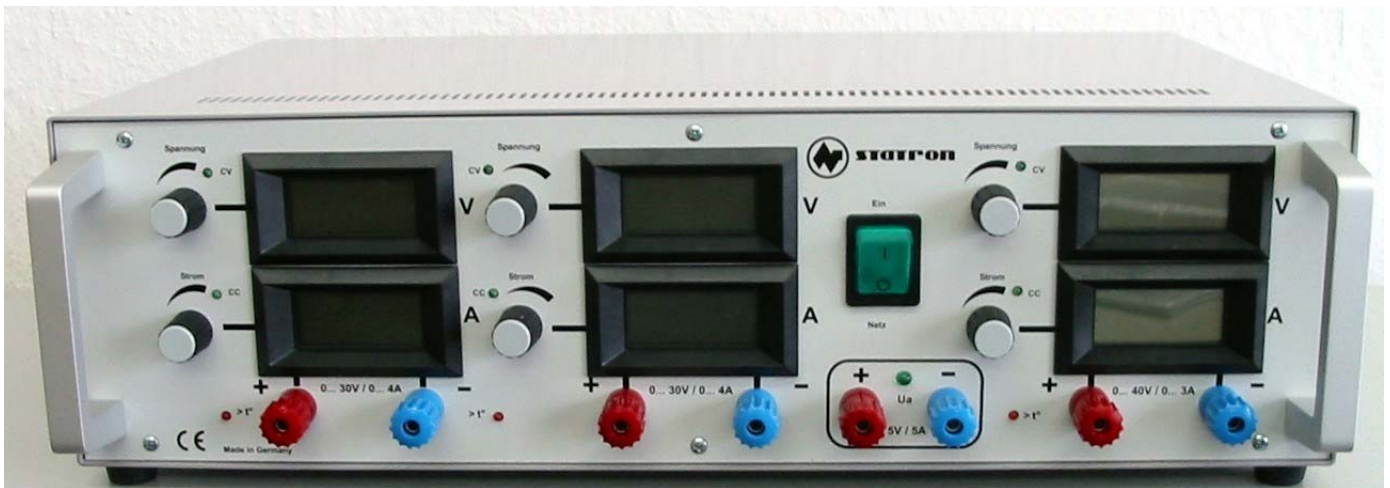


**STATRON**

Gerätetechnik GmbH

## Operating instruction lab power supply unit

### type 3225.71



#### The intended application of the power supply unit covers:

- link and operation of low-voltage consumers with an operating voltage between 2x(0 to 30 VDC) and 1x (0 to 40VDC/0-3A) . Fixed output 5VDC/5A The power input of the consumer may not exceed 4,0 A. Output 1 to 3 can be connect parallel or series.

#### **Note! Absolutely read!**

- Read this guidance exactly. With damage, which is caused by neglect of the guidance, the warranty claim goes out. For damages we do not take over adhesion.

#### 1. introduction

this power supply unit is universally applicable with its infinitely variable adjustment possibilities of voltage and current for school, occupation, hobby etc.. An electronic current limiting protects the power supply unit against overloading. Output voltage and - current are electronically stabilized and infinitely variable adjustable. Thus the

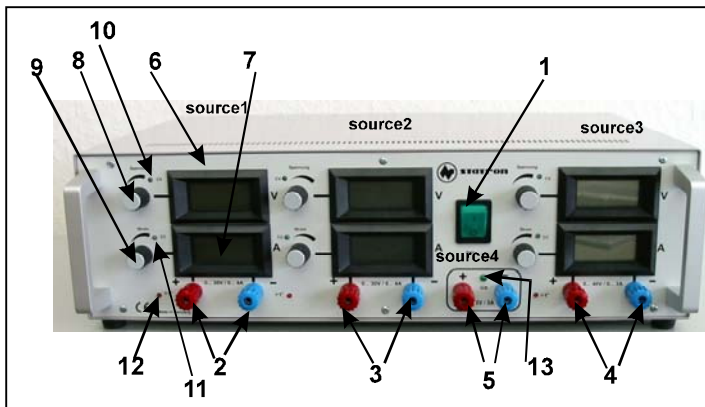
electronic restraint current can as adjustable Current limiting to be used, in order to protect consumers against a too high power input. In the case of an overloading the output voltage is then lowered accordingly (in the case of short-circuit on close 0V). With removal of the overload the output voltage adjusted before resets itself automatically. The respective operating point - voltage - (u) - or restraint current (i) - is displayed by one red LED each. The adjusted values are readable over 2 LCD displays each. The voltage or current adjustment is made by one wirewound potentiometers ten turns.

## 2. Safety instructions

- 2.1 The power supply unit is in protection class I. The safety measures comply with DIN EN61010 and DIN EN 60950. The transformers comply with DIN EN 61558 and have passed the primary/secondary 3.75 kVeff tests.
  - 2.2 Check that the protective grounding conductor (yellow/green) is not disconnected either from the mains cable or in the unit, since a disconnected protective conductor may lead to a risk of death. Also check that the insulation is not damaged or destroyed.
  - 2.3 Power supply units must be kept out of the reach of children!
  - 2.4 In commercial establishments, the safety regulations of the professional trade association for electrical appliances and equipment must be observed.
  - 2.5 In schools, educational establishments, hobby and independent workshops, there must be careful supervision that power supply units are operated by trained personnel.
  - 2.6 When opening covers or removing components, apart from when this can be done by hand, live parts may be exposed. Connections may also be live. Before adjustment, maintenance, repair or replacement of components, the unit must be disconnected from any power source, if opening the unit is necessary. Thereafter, if adjustment, maintenance or repair of the open unit when it is connected to the power supply is unavoidable, this may only be carried out by a specialist engineer familiar with the associated risks and relevant regulations.
  - 2.7 The capacitors in the unit may still carry a charge, even when the unit is disconnected from any power supply.
  - 2.8 Check that only fuses of the type and fuse current rating indicated are used as replacements. The use of repaired fuses or bridging of the fuse holder is not permitted. The unit is protected against overloading and short-circuits. If the primary fuse melts, there is a serious fault which must be dealt with by a specialist engineer. After successful repair, a new fuse link can then be installed by an engineer.
  - 2.9 Do not switch on the power supply unit if it has been moved from a cold to a warm place. In unfavorable conditions, the condensed water released on thawing can destroy your unit or cause life-threatening voltages at the output terminals. Ensure that the unit can warm up to room temperature without any adjacent mains current.
  - 2.10 When working with power supply units, you are not permitted to wear any metallic or conductive jewelry like chains, bracelets, or similar.
  - 2.11 Power supply units are not permitted for use on human beings or animals.
  - 2.12 Series connection of the outputs of one or more mains power units causes life-threatening voltages (>35 VDC).
  - 2.13 The vents on the mains supply units must not be covered! The units must be placed on firm, non-flammable surfaces, so that the air can enter unhindered. Cooling of the appliances occurs by forced ventilation.
  - 2.14 The mains supply units and the consumer loads connected to them must not be operated without supervision. Measures must be taken to ensure the safety and protection of connected loads against effects caused by the mains power supply unit (e.g. overload, breakdown of the mains appliance) and by the connected loads themselves (e.g. current consumption above the permitted level).
- Warning! Sensitive consumer loads must be protected against damage by additional external measures!**
- 2.15 In case of fault, power supply units can output voltages over 50V DC, which causes risk, even if the specified output voltages of the units are lower.
  - 2.16 When working with electrical voltages, only tools expressly permitted for the purpose are to be used.
  - 2.17 The outputs of the power supply units (output bushes/terminals) and leads attached to them must be protected against direct contact. The leads used must therefore have a sufficient level of insulation and/or dielectric strength and the contact points must be protected from being touched (safety bushes).
  - 2.18 Connection of uninsulated metallic leads and contacts must be avoided. All of these points must be protected with suitable, non-flammable insulation material or with other measures. The electrically conductive components of the connected loads must also be protected from direct contact by appropriate measures.
  - 2.19 If it becomes apparent that safe operation is no longer possible, the unit must be disabled and secured against unintentional operation. It is apparent that safe operation is no longer possible when:
    - the unit or the mains cable show visible signs of damage

- the unit no longer works
- it has been stored for a long time under unsuitable conditions
- it has been transported under difficult conditions

### 3. Controls



- 1-power switch
- 2 4mm sockets source 1
- 3 4mm sockets source 2
- 4 4mm sockets source 3
- 5 4mm sockets source 3
- 6 LCD - voltage display source 1
- 7 LCD current display source 1
- 8 poti voltage source 1
- 9 poti current source 1
- 10 LED constant current operation source 1
- 11 LED constant current operation source 1
- 12 LED temperature rise source 1
- 13 LED output source 4

**source 1 to 3 are in the handling the same !**

### 4. Line-up

a) The euro - connector of the power supply unit into

- Note! With longer operation with max. current consumption or in the case of short-circuit the radiator

box in the power supply unit becomes very heat. An overloading of the power pack is displayed by the red LED " temperature rise ". At the same time by lowering the original data of the longitudinal automatic controllers of the dc source against thermal overloading one protects.

Pay attention therefore absolutely to a sufficient ventilation of the power supply unit not uncover, it never the ventilation slots at the device lower surface and at the rear wall the air outlet opening of forced cooling. Absolutely make sure when connecting a consumer that this is not attached in the switched on status. A switched on consumer can lead with the link to the output terminals of the power supply unit to a sparking at the connecting terminals, which again

**b) Adjustable of the voltage**

Turn first the adjusting knob for the current limiting a little to the right side (in the clockwise direction), until the LED (= light emitting diode) for current limiting is not lighting. In the same instant the LED for the voltage adjustment begins to light up. Now you can adjust the desired output voltage. The LCD display shows the adjusted output voltage.

**c) Adjustment of the current limiting closing it the output**

terminals with switched off power supply unit briefly. Switch then the network on. The display for output current displays,

depending upon adjustment of the adjusting knob for current limiting, a value. Stop the current limiting, i.e. the "maximum stream", with which the power supply unit is to limit. After adjustment they open the short-circuit with switched off power supply unit, since otherwise an outline spark can develop. Series connection / parallel connection around optimal base values to achieve and overloading avoid should become preset the sources with for instance the same original data. Max. 2 sources in series may do geschalten to become.

## Technical data

Specification		type			
		3225.71			
DC	output voltage	0-30V	0-30V	0-40V	5 V
DC	output current	0-4A	0-4A	0-3A	5A
	CV stability net +5/-7%	2mV	2mV	2mV	5mV
	CV stability load 0-100%	40mV	40mV	40mV	50mV
	CV remaining ripple U <sub>eff</sub>	2mV	2mV	2mV	2mV
	CC stability net +5/-7%	2mA	2mA	3mA	
	CC stability load 0-100%	3mA	3mA	3mA	
	CC remaining ripple I <sub>eff</sub>	2mA	2mA	3mA	
	correction time load 10-100%	100µs			
	adjuster U <sub>output</sub> / I <sub>output</sub>	wirewound potentiometers ten turns / wirewound potentiometers ten turns			
	dissolution of adjusting	0,10%			
	characteristic	U / I			
	display for U / I	LCD 13 mm 3½-digit			
	Operating temperature	0 - 35°C			
	output connector	4 mm safety sockets			
	max. relative humidity	85% by 35°C			
AC	input voltage	230 V +5% / -7% 48-62Hz			
AC	testing voltages	EN 61010 ; EN 61558-2-4			
	safety class	I			
	dimensions WxHxD mm	451 x 134 x 324			
	weight kg	19			
	electromagnetic compatibility	EN 61000-6-3 ; EN 61000-6-2			

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