



**Labornetzgerät
Laboratory Power Supply
Alimentation de Laboratoire**

**EA-PS 3065-10 B
0...65V / 0...10A**

Art.-Nr.: 35320178



Technical specifications

Power

Voltage	88...264V
Frequency	50 / 60Hz
Power factor correction	>0.99
Fuse	10A T

Output

<u>Voltage</u>	
- Fine adjustment range	0...65V
- Adjustment range	approx. 3.2V
- Stability 0...100% Load	<30mV
- Stability $\pm 10\%$ UE	<2mV
- Ripple	<10mV _{rms}
- Regulation 10...90% Load	<3ms
- Regulation 90...100% Load	<3ms

Current

- Adjustment range	0...10A
- Fine adjustment range	approx. 0.5A
- Stability 0...100% UA	<50mA
- Ripple	<5mA _{rms}

Protection

- Over voltage protection (OVP)	0...71.5V
- Over current protection (CC)	0...10A
- Over temperature protection (OT)	Output shutdown

Control elements

Voltage adjustment	Potentiometer coarse / fine
Current adjustment	Potentiometer coarse / fine
Over voltage protection	Trim pot. 10 turns
Preset OVP / Current	Pushbutton (Preset)

Indicators

Voltage	LED 7-segment 3-digit
Current	LED 7-segment 3-digit
Over voltage protection	LED 7-segment 3-digit
Status indication	LEDs

Analogue interface

<u>Inputs</u>	<u>Signal</u>
Voltage 0...100%	0...10V
Current 0...100%	0...10V
Analogue interface On/Off (SEL-enable)	open collector
Output On/Off (Standby)	open collector

Outputs

	<u>Signal</u>
Voltage 0...100%	0...10V
Current 0...100%	0...10V
Supply voltage +VCC	12...15V 100mA
Reference voltage VREF	10.0V 5mA
Over voltage indicator (OVP)	open collector
Over temperature indicator(OT)	open collector
Control mode (CV/CC)	open collector

Miscellaneous

Operating temperature	0...40°C
Storage temperature	-20...70°C
Relative humidity	<80% without condensation

Accessories

USB interface	UTA12
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Important Details

Unpacking

Check the contents after unpacking for missing parts or accessories and the unit for any apparent mechanical damages and loose parts inside the unit. In case of a transport damage please inform the seller immediately. In that case do not take the unit into operation.

Commissioning

For safety reasons the unit may only be operated at a mains power connection provided with a safety ground or via an insulating transformer safety class 2. The air in- and outlets on the back side may never be obstructed in order to ensure proper cooling.

Mains power voltage selection and fuse replacement

Before putting the unit into operation make sure that the available mains power voltage and the setting of the input voltage selector on the back have the same value (115 or 230 V). If it is required to adjust the input selector to the mains power voltage value, an input fuse with an appropriate voltage value has to be fit as well. The fuse may only be changed or replaced whilst the unit is disconnected from the mains power line. The fuse and the respective values are shown on the back side of the unit.

General

The power supply series EA-PS 3000B (600 – 650 W output power) is of primary switching technology and is provided with a Power Factor Correction circuit (i.e. PFC, sinusoidal input current). This series is distinguished by its compact built-up, lightweight, excellent electrical values and extended operational features, such as fine and coarse adjust of output voltage and current, preset function for output voltage and overvoltage protection (OVP) and the display of various operation statuses. Cooling is provided via a temperature controlled fan. Furthermore, this series features an analogue interface (0-10V) for remote control and can, in addition, be fitted with an external USB interface adapter (EA-UTA12).

Controls and displays

Output voltage and current can be preset through coarse and fine potentiometers placed on the front panel or via 0...10V through the analogue interface. The respective values are shown on the 3-digit 7-segment LED meters or via the analogue interface (0...10V).

Whilst pushing the preset button, the preset current and the preset overvoltage protection value (i.e. OVP, setting through the 10-turn potentiometer on the front), are displayed on the LED meters.

The regulation mode is indicated via two LEDs.
LED CV = constant voltage mode
LED CC = constant current mode

Furthermore, the LEDs on the front panel show the following operation conditions.

LED Standby	= Shut down by analogue interface
LED OVP	= Shut down by overvoltage (OVP)
LED OT	= Shut down by overheating (OT)
LED External	= Analogue interface active

Output terminals

The output is provided through two safety sockets on the front panel and in addition via screw terminals on the rear side. The connections for "remote sensing" i.e. to compensate the voltage loss on the load wires, are placed on the rear side as well.

Notice

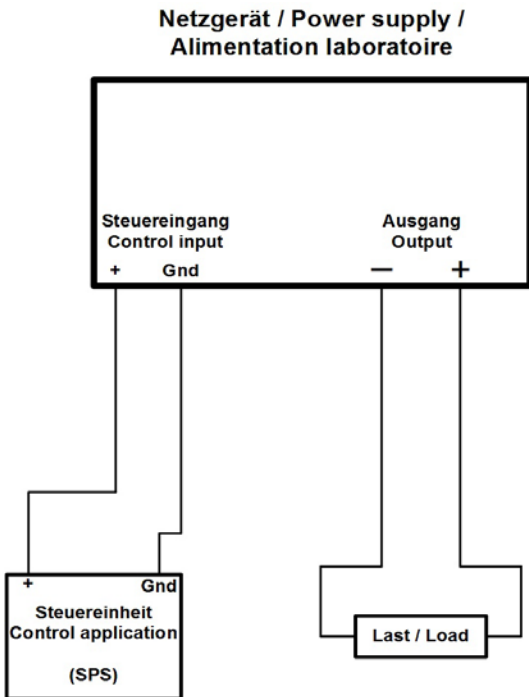
The continuing development of our products can be the reason that the unit described in this manual may be slightly different from the unit being delivered. Only data with tolerances or boundaries are guaranteed. Data without tolerances are for information only and not guaranteed.

Technical description

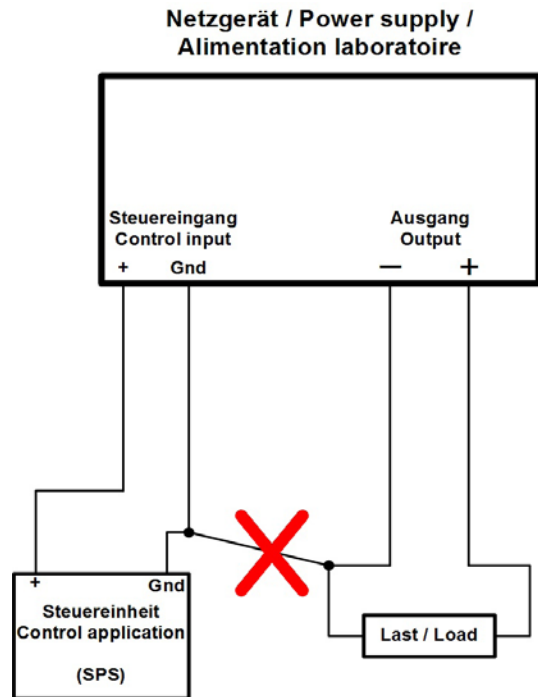
Important! The signal ground (GND) of the analogue interface and the negative (-) output are internally connected. When wiring these two lines separately to a control application (eg. a SPS) and a load, they must not be connected directly to each other at the external application! Else the load current may be distributed over both lines and damage the normally small-sized control lines.

This problem does not occur if a galvanic isolation of the control signals is used at any point, for instance when using a CAN or GPIB interface card.

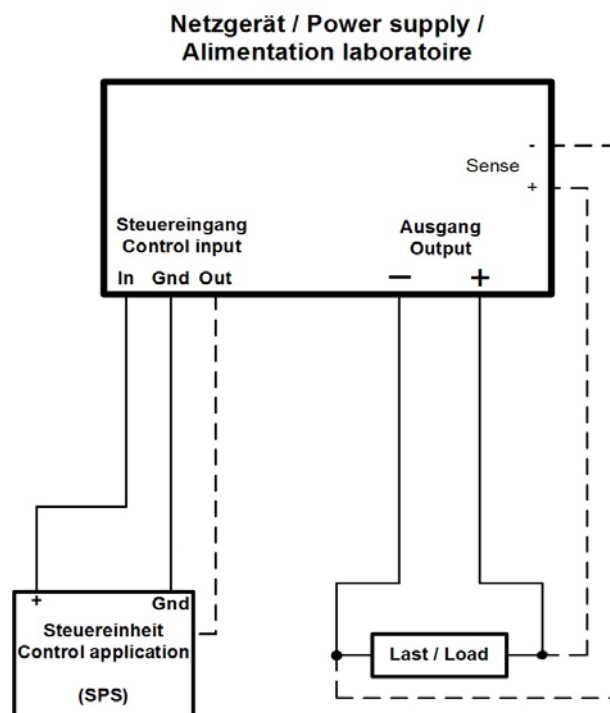
Correct



Wrong



One possible solution is given below. In order to measure the voltage at the load, wire the „Remote sense“ feature. The actual value output UMON can be wired with the control application to measure the voltage.

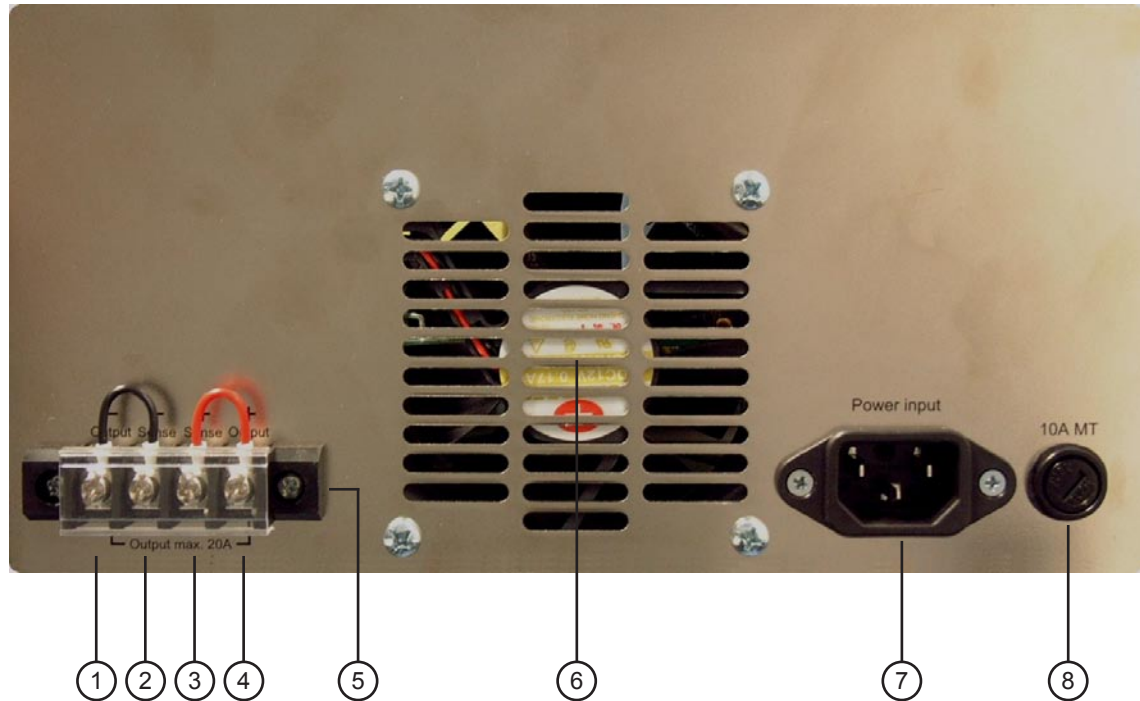


Bezeichnung der Bedienelemente
Operating controls
Désignation des éléments de commande



1	Netzschalter	Mains switch	Interrupteur du réseau
2	Drehregler Spannung grob	Voltage rotary control (coarse)	Bouton de régle de tension grossier
3	Anzeige Spannung (Preset=OVP)	Display voltage (Preset=OVP)	Indicateur de la tension
4	Regelungsart Spannungsregelung	Voltage control mode indication	Réglage de tension
5	Drehregler Spannung fein	Voltage rotary control (fine)	Bouton de régle de tension fin
6	Taster Voreinstellung OVP / Strom	Pushbutton Preset OVP/current	Bouton pousseur pré réglage OVP / courant
7	Zustandsanzeigen	Status indication	Visualisation d'état
8	Analschnittstelle	Analogue interface	Interface analogique
9	Einstellung Überspannungsschutz	Adjustment overvoltage protection	Ajustage Protection contre les surtension
10	Drehregler Strom grob	Current rotary control (coarse)	Bouton de régle de courant grossier
11	Regelungsart Stromregelung	Current control mode	Réglage de courant
12	Anzeige Strom	Display current	Indicateur de la courant
13	Drehregler Strom fein	Current rotary control (fine)	Bouton de régle de courant fin
14	Erdungsbuchse	Grounding connector	Borne de terre
15	Ausgangsklemmen	Output terminals	Point de sortie

Bezeichnung der Bedienelemente
Operating controls
Désignation des éléments de commande



1	- Ausgang	- Output	- Sortie
2	- Fernfühlung	- Sense	- Détecteur
3	+ Fernfühlung	+ Sense	+ Détecteur
4	+ Ausgang	+ Output	+ Sortie
5	Ausgangsklemmen Rückseite	Output terminals rearside	Barre à bornes du revers
6	Luftaustritt	Air outlet	Bouche d'aération
8	Kaltgeräteeinbaustecker	Power receptacle	Branchement au secteur
9	Netzsicherung	Line fuse	Fusible d'entrée



Elektro-Automatik

EA-Elektro-Automatik GmbH & Co. KG

Entwicklung - Produktion - Vertrieb

Helmholtzstraße 31-33

41747 Viersen

Telefon: 02162 / 37 85-0

Telefax: 02162 / 16 230

ea1974@elektroautomatik.de

www.elektroautomatik.de
