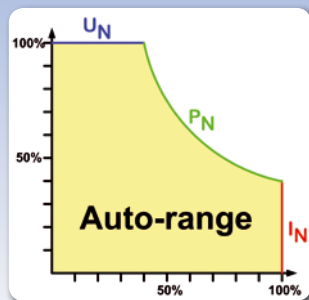


EA-PSI 8000 T 320W - 1500W

可编程实验室直流电源 / PROGRAMMABLE LABORATORY DC POWER SUPPLIES



EA-PSI 8032-20 T

- 宽范围输入电压90...264V，带主动式PFC
- 效率高达 92%
- 输出功率: 320W 至 0...1500W
- 输出电压: 0...16V 至 0...360V
- 输出电流: 0...4A 至 0...60A
- 灵活的功率调整输出级*
- 有过压保护 (OVP)
- 有过温保护 (OT)
- 图形显示器指示所有数值和功能
- 显示器指示状态和提示信息
- 可自动检测的远程感测端
- 多功能模拟接口
 - 通过 0...10V 或 0...5V电压可对U / I / P* 编程
 - 通过 0...10V 或 0...5V电压可监控U / I
- 报警管理系统，用户配置文档
- 内置函数发生器
- 温控风扇制冷
- 可选多种接口卡
- 内阻调整 (可选)

- **Wide input voltage range 90...264V with active PFC**
- **High efficiency up to 92%**
- **Output power ratings: 320W up to 0...1500W**
- **Output voltages: 0...16V up to 0...360V**
- **Output currents: 0...4A up to 0...60A**
- **Flexible, power regulated output stage***
- **Overvoltage protection (OVP)**
- **Overtemperature protection (OT)**
- **Graphic display for all values and functions**
- **Status indication and notifications via display**
- **Remote sense with automatic detection**
- **Analogue interface with many functions**
 - **U / I / P* programmable with 0...10V or 0...5V**
 - **U / I monitoring with 0...10V or 0...5V**
- **Alarm management, user profiles**
- **Integrated function manager**
- **Temperature controlled fans for cooling**
- **Optional interface cards**
- **Internal resistance regulation (optional)**

概要

EA-PSI 8000 T 系列是一款由微处理器控制，采用最新技术设计的实验室电源。标准版配备多种功能和特征，让用户使用起来更方便、有效。

本产品可设置和存储用户与制程配置文档，这样可改善重复测试或其它应用。

带有可调延时报警的扩展监控功能，可监控所有输出参数，从而简化了测试组装，故基本无需外部监控。

General

The microprocessor controlled laboratory power supplies of series EA-PSI 8000 T cover state-of-the-art technology. They offer a lot of features in the standard version, making the use of this equipment remarkably easy and most effective. User and process profiles can be configured, saved and archived so that the reproducibility of a test or other application is improved.

The extensive integrated monitoring functions for all output parameters with adjustable delays of alerts simplify test assembly, such that the usual external monitoring is mostly unnecessary.

* 针对1kW以上型号

* Models from 1kW

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输入

采用主动式功率因数校正线路，使产品在 90V 至 264V AC 全世界宽范围输入电压下都适用。1.5kW 型号在输入电压低于 150V AC 时总输出功率将降至 1kW。

功率

1kW 以上型号输出功率可灵活调整。可在低电流时输出更高的电压，或在低电压时输出更大的电流，都由最大额定输出功率来限制。因此一台该产品能涵盖广范围的应用领域。设定功率可从 0..100% 之间可调，或手动调节或远程控制。1.5kW 型号产品有功率降额功能，即：在输入电压 <150V_{AC} 时最大输出功率减少至 1kW。

直流输出

本系列有多款不同型号，可选择 0...16V 和 0...360V 输出电压，0...4A 和 0...60A 输出电流，320W 和 0...1500W 输出功率的型号。输出端位于产品前面板。

过压保护 (OVP)

为保护连接负载，可设定一过压保护极限值(OVP)。

若输出电压超过调节极限值，输出被关断，显示器和模拟接口发出一声频报警信号。

报警管理系统

为监控正确的输出电压和电流，可定义上、下限。

若偏差超过该调节极限，应用设备出现下面三种可能性反应：

- 只显示信号；即使错误仍存在，也不影响输出。
- 警告一直持续，消除错误后必须确认警告信息。
- 报警会暂时性地关断输出。

报警和警告可通过声频发出信号。

显示和控制键

易读型图形显示器清晰显示设定输出值、实际输出值、操作按钮的操作状态和当前功能。菜单清晰指引用户查阅所有必要信息和调节值。

输出电压、电流和功率的设定值与实际值都显示于图形显示器上，还包括产品的运作状态，菜单指引和按钮当前功能，故用户能直观地操作本产品。

输出电压、电流和功率或可调内阻的调节，由两个旋钮完成。旋钮可在不同菜单设置下更改数值。为避免误操作，可锁定所有操作控制键。

Input

The devices have an active Power Factor Correction circuit which enables them to be used worldwide on a mains input from 90V up to 264V AC.

Power

Models from 1kW output power are equipped with a flexible, auto-ranging output stage. It provides a higher output voltage at lower output current or a higher output current at lower output voltage, always limited the max. nominal output power. Therefore, a wide range of applications can already be covered by the use of just one single unit. The power set value is adjustable on these models from 0..100%, either manually or in remote control. Units with 1.5kW are derated, i.e. reduced to 1kW max. power at input voltages below 150V_{AC}.

DC output

Output voltages between 0...16V and 0...360V, output currents between 0...4A and 0...60A and output power ratings between 320W and 0...1500W are available. The output terminal is located in the front panel.

Overvoltage protection (OVP)

In order to protect connected loads, it is possible to adjust an overvoltage protection threshold (OVP).

If the output voltage exceeds the defined limit, the output is shut-off and an acoustic warning signal will be given by the unit together with a status signal in the display and via the analogue interface.

Alarm management

For monitoring the correct output voltage and output current, lower and upper limits can be defined.

If the deviation exceeds the adjusted limits, three possibilities are available as to how the appliance should react:

- Signals are displayed only, even if the fault is still active, without affecting to the output.
- Warnings remain active and must be acknowledged after the fault is removed.
- Alarms will shut off the output instantly in case the deviation exceeds the adjusted limits.

Alarms and Warnings can be signalled audibly.

Displays and controls

The easily readable graphic display shows a clear representation of set values, actual output values, the operational state and the current functions of the operation pushbuttons. For all necessary information and adjustments the user is guided by a clear menu.

Set values and actual values of output voltage, output current and output power are clearly represented on the graphic display. The operating state of the device, the menu guidance and the current assignment of the pushbuttons are also shown on the display. So the user is able to operate the unit intuitively.

The adjustment of output voltage, output current and output power, or optional internal resistance, is realised by two rotary knobs. These knobs are used to change values in the different menus as well. To prevent unintentional operations, all operation controls can be locked.

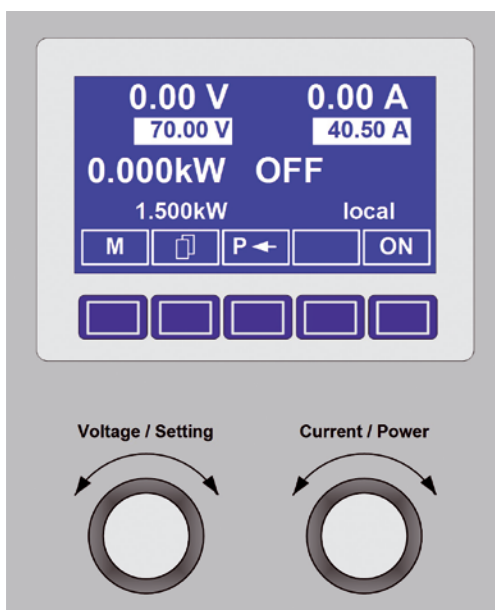
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显示器和控制面板

Display and control panel

实际电压和电流
 预设电压和电流
 实际功率 / 输出状态
 预设功率 / 状态
 按钮功能
 按键面板



Actual values voltage and current
 Preset values voltage and current
 Actual value power / status output
 Preset value power / status
 Assignment of the pushbuttons
 Button panel

设置用旋钮

Rotary knobs for settings

函数管理器

函数由序列组成，通过控制面板可对其进行修改。

一个函数由最多5个序列组成，可按任意顺序排列，重复次数最多为5次。

每个序列可设置最大功率或可选内阻，重复次数为一至254次，或者无穷大。

同样地，整个函数段的重复次数可以设置成一至254次，或无穷大。

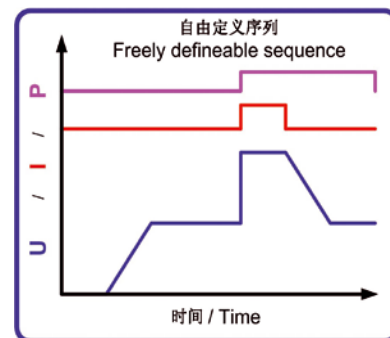
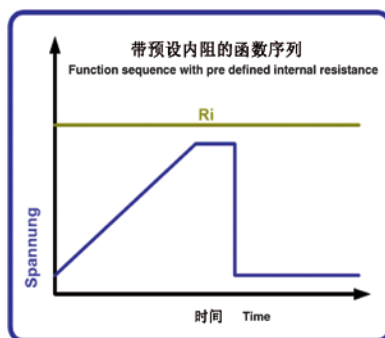
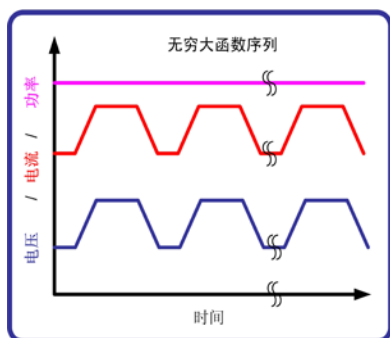
Function manager

Functions consist of sequences and can be modified on the control panel.

Up to five different sequences can be assigned to a function in any succession or be repeated up to five times.

For each sequence, the maximum power, or optionally the internal resistance, and a repetition value from once up to 254 times or endless can be configured.

As well, the repetition of a whole function can be configured from once up to 254 times or endless.



用户配置文档

经控制面板可存储多达四种用户配置文档。

用户配置文档专门用来设置和存储用户指定的参数块。

User profiles

Via the control panel up to four different user profiles can be stored.

The user profiles are designed to set and save user specified parameter blocks.

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远程感测端

远程感测输入端可直接连到负载设备，以补偿连线上的压降。如果输入端已接上负载，本电源会自动检测并调整输出电压，以确保负载获得准确所需的电压值。

输出值的预设

若想在不会影响输出状态的前提下预设输出电压、电流或功率（针对1kW以上型号），可先显示设定值，即于实际值的下方。这样用户可预设期望输出电压、电流和功率。并在预设清单内存储4组U / I / P参数块。该清单内的参数块可上载作为常用需求值。

模拟接口

内置模拟接口位于产品前面板。它提供有模拟接口输入脚，接上0V...10V或0V...5V电压，可设置0...100%的输出电压、电流（1kW以上型号）。模拟输出端接上0V...10V或0V...5V电压，可监控输出电压、电流和功率。此外，还有几个输入端和输出端，用来控制和监控产品状态。

选购件

- 可利用匹配RS232、CAN、USB、GPIB (IEEE)、Profibus或Ethernet/LAN的绝缘数字接口卡，经电脑控制产品。接口插槽位于产品后板，方便用户插上新接口或替换当前接口。产品会自动检测接口，并提示需要进行少许配置或不用配置。随接口卡附有免费Windows软件，可用来控制和监控，记录数据和排序。也可参考63和64页。
- 带扩展功能的电隔离模拟接口
- 内阻调整
- 高速跃变（仅针对1kW以上产品，见118页）

Remote sense

The standard sense input can be connected directly to the load in order to compensate voltage drops along the cables. If the sense input is connected to the load, the power supply will detect this and adjust the output voltage automatically to ensure the accurate required voltage is available at the load.

Presetting of output values

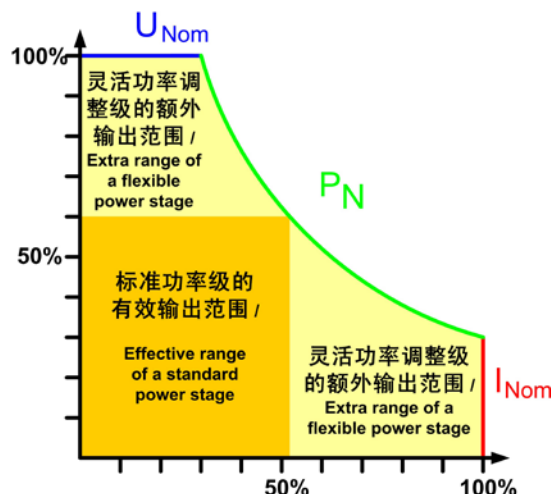
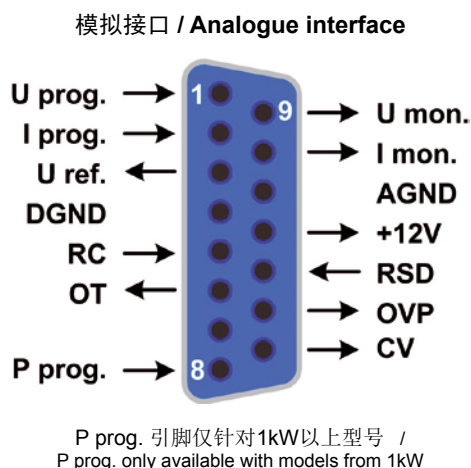
In order to preset output values for voltage, current or power (with models from 1kW) without affecting the output condition, the set values will be displayed right below the actual value. Also four parameter blocks for U / I / P can be stored in a preset list. From this list parameter blocks can be loaded for frequently required values.

Analogue Interface

The built-in analogue interface is located on the front of the device and provides inputs to set voltage, current and power (models from 1kW) from 0...100% via a control voltage of 0V...10V or 0V...5V. To monitor output voltage and current, analogue outputs of 0V...10V or 0V...5V can be read out. Furthermore, several inputs and outputs are available for controlling and monitoring the device status.

Options

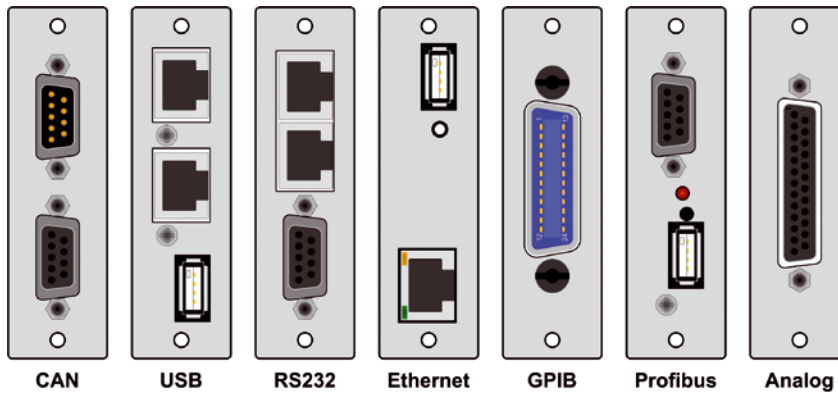
- Isolated digital interface cards for RS232, CAN, USB, GPIB (IEEE), Profibus or Ethernet/LAN to control the device by PC. The interface slot is located on the rear panel, making it easy for the user to plug in a new interface or to replace an existing one. The interface will be automatically detected by the device and requires no or only little configuration. Included with the interface cards is a free Windows software which provides control and monitoring, data logging and sequences. See pages 63 and 64.
- Analogue, galvanically isolated interface card with extended features
- Internal resistance regulation
- High speed ramping (only for models as from 1kW, also see page 118)



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接口卡 / Interface cards



后面板图

电源插座 /
Mains input



风扇 / Fan

Rear view

保险丝 / Fuse

电源开关 /
Mains switch

接口卡插槽 /
Slot for Interface card

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技术参数	Technical Data	EA-PSI 8000 T
输入电压	Input voltage	90...264V AC
-频率	-Frequency	45...65Hz
-功率因数	-Power factor	>0.99
输入：电压	Output: Voltage	
-型号	-Type	直流 / DC
-精确度	-Accuracy	<0.2%
-负载0-100% 时的稳定度	-Stability at 0-100% load	<0.05%
-在±10% Δ U _{IN} 时的稳定度	-Stability at ±10% ΔU _{IN}	<0.02%
-负载从10%-100%调整需时	-Regulation 10-100% load	<2ms
-负载从10-90%上升需时	-Rise time 10-90%	最长 30ms
-过压保护	-Overvoltage protection	可调, 范围为0...110% U _{Nom} / adjustable, 0...110% U _{Nom}
输入：电流	Output: Current	
-精确度	-Accuracy	<0.2%
-负载0-100% Δ U _A 时的稳定度	-Stability at 0-100% ΔU _{OUT}	<0.15%
-在±10% Δ U _{IN} 时的稳定度	-Stability at ±10% ΔU _{IN}	<0.05%
过压类别	Overvoltage category	2
过热保护	Thermal protection	输出关闭 / Shutdown of the output
隔离耐压	Isolation	
-输入对输出	-Input to output	2500V DC
-输出对外壳	-Output to enclosure	500V DC
污染等级	Pollution degree	2
保护级别	Protection class	1
模拟编程	Analogue programming	
-输入范围	-Input range	0...5V 或 / or 0...10V (可转换 / switchable)
-U / I 的精确度	-Accuracy U / I	<0.2%
-输入阻抗	-Input impedance	53kΩ
安全标准	Standards	EN 60950, EN 61326, EN 55022 级别 B / Class B
制冷	Cooling	风扇 / Fan
工作温度	Operation temperature	0...50°C
储存温度	Storage temperature	-20...70°C
相对湿度	Humidity	<80%
使用高度	Operation altitude	<2000m

型号	电压	电流	功率	效率	U最大时的纹波	I最大时的纹波	远程感测 补偿电压	尺寸 BxHxT	重量	产品编 号
Model	Voltage	Current	Power	Efficiency	Ripple U max.	Ripple I max.	Remote sense compensation	Dimensions WxHxD	Weight	Article number
PSI 8016-20 T	0...16V	0...20A	320W	90.5%	40mV _{PP} / 4mV _{RMS}	60mA _{PP} / 10mA _{RMS}	max. 2V	90x240x280mm	3.8kg	09200400
PSI 8032-10 T	0...32V	0...10A	320W	93%	100mV _{PP} / 10mV _{RMS}	35mA _{PP} / 7mA _{RMS}	max. 2V	90x240x280mm	3.8kg	09200401
PSI 8065-05 T	0...65V	0...5A	325W	93%	150mV _{PP} / 20mV _{RMS}	12mA _{PP} / 3mA _{RMS}	max. 2V	90x240x280mm	3.8kg	09200402
PSI 8032-20 T	0...32V	0...20A	640W	90.5%	100mV _{PP} / 8mV _{RMS}	65mA _{PP} / 10mA _{RMS}	max. 2V	90x240x280mm	3.8kg	09200403
PSI 8065-10 T	0...65V	0...10A	650W	90.5%	150mV _{PP} / 10mV _{RMS}	25mA _{PP} / 3mA _{RMS}	max. 2V	90x240x280mm	3.8kg	09200404
PSI 8160-04 T	0...160V	0...4A	640W	90.5%	120mV _{PP} / 20mV _{RMS}	3mA _{PP} / 1mA _{RMS}	max. 2V	90x240x280mm	3.8kg	09200405
PSI 8080-40 T	0...80V	0...40A	0...1000W	93%	10mV _{PP} / 4mV _{RMS}	19mA _{PP} / 7mA _{RMS}	max. 2.5V	90x240x395mm	6.5kg	09200406
PSI 8360-10 T	0...360V	0...10A	0...1000W	90.5%	30mV _{PP} / 11mV _{RMS}	1mA _{PP} / 0.45mA _{RMS}	max. 8V	90x240x395mm	6.5kg	09200408
PSI 8080-60 T	0...80V	0...60A	0...1500W	93%	10mV _{PP} / 4mV _{RMS}	19mA _{PP} / 7mA _{RMS}	max. 2.5V	90x240x395mm	6.5kg	09200407
PSI 8360-15 T	0...360V	0...15A	0...1500W	90.5%	50mV _{PP} / 8mV _{RMS}	1mA _{PP} / 0.45mA _{RMS}	max. 8V	90x240x395mm	6.5kg	09200409