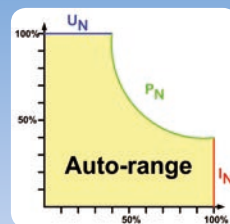




EA-PSI 5000 160 W - 640 W

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



EA-PSI 5200-10

- 宽范围输入电压90...264 V，带主动式PFC
- 效率高达92%
- 输出功率有：0...160 W至0...640 W
- 输出电压：0...40 V 至 0...200 V
- 输出电流：0...2 A 至 0...40 A
- 灵活的功率调整输出
- 各种保护功能（OVP, OCP, OTP）
- 可显示所有数值与状态的蓝屏液晶显示器
- 远程感测
- 9个预设记忆组
- 电隔离模拟接口
 - 通过0...10 V电压可对U / I / P编程
 - 通过0...10 V电压可监控U / I
- 温控风扇制冷 *
- 上下壳是一整体
- 符合SELV标准 (EN 60950)的40 V产品型号
- 配有USB与以太网端口
- EMC符合EN 55022 等级B
- 支持SCPI指令语言

- **Wide input voltage range 90...264 V with active PFC**
- **High efficiency up to 92%**
- **Output power ratings: 0...160 W up to 0...640 W**
- **Output voltages: 0...40 V up to 0...200 V**
- **Output currents: 0...2 A up to 0...40 A**
- **Flexible, power regulated output stage**
- **Various protection circuits (OVP, OCP, OTP)**
- **Blue LCD display for all value and status**
- **Remote sense**
- **Memory for 9 different presets**
- **Galvanically isolated, analog interface with**
 - **U / I / P programmable via 0...10 V**
 - **U / I monitoring via 0...10 V**
- **Temperature controlled fans for cooling ***
- **Chassis top and bottom closed**
- **40 V models according to SELV (EN 60950)**
- **USB and Ethernet port integrated**
- **EMC according to EN 55022 Class B**
- **SCPI command language supported**

概要

EA-PSI 5000系列是一款由微处理器控制的实验室电源，其标准型号配备多种功能。设定值、实际值与状态都能同一时间清晰显示于蓝光LCD屏上，让用户一览无遗。

所有输出参数的监控功能有助于测试设备的减少，且几乎不需要安装外部的监控硬件与软件。

控制面板上清晰地分布有两个旋钮，五个按钮。用户仅需用手指点触几下就能轻易地操控本产品。

若想集成到远程控制的实验室应用与小的测试系统中，本产品后板还配有一组接口（模拟与数字的都有）。

AC输入

采用主动式功率因数校正线路，使产品在90 V_{AC}至264 V_{AC}全世界宽范围输入电压下都适用。

General

The microprocessor controlled laboratory power supplies of series EA-PSI 5000 offer a set of useful standard features, which can facilitate operation. Set values, actual values and status are clearly displayed at the same time on the blue, illuminated LCD, in order to have them at one glance.

The implemented supervision features for all output parameters can help to reduce test equipment and make it almost unnecessary to install external supervision hardware and software. The clearly arranged control panel with its two knobs and five pushbuttons enables the user to handle the device easily with a few touches of a finger.

For the integration into remotely controlled laboratory applications and small test systems, the devices offer a set of interfaces (analog and digital) on their rear side.

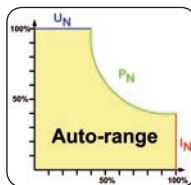
AC input

All units are provided with an active **Power Factor Correction** circuit and are suitable for a worldwide usage on a mains supply from 90 V up to 264 V AC.



功率

本系列所有型号的输出功率都可灵活调整。可在低电流时输出高电压，或在低电压时输出大电流，但总是受限于最大额定输出功率范围内。本系列产品的设定功率值都可调，因此仅用一台产品却能应用于广范围的应用中。



直流输出

本系列有多款不同型号，可选择0...40 V和0...200 V输出电压，0...2 A和0...40 A输出电流，0...160 W和0...640 W输出功率的型号。因此不管是手动还是远程控制（模拟或数字），都可在0%与100%之间连续调节电流、电压与功率。

输出端位于产品后前板上。产品后板还有一个额外的输出端，为螺丝端子。

保护功能

为保护连接设备，可给产品设定一过压保护极限值(OVP)，以及过流(OCP)保护极限值。

一旦因任何缘故超过了这三个极限值中的一个，直流输出会被立即切断，在显示器和接口端会发出一个状态信号。

本产品还有过温保护，如果产品过热，它会关断直流输出。

显示器和控制键

显示器清晰显示输出电压与电流的设定与实际值。

旋钮可用来调节设定电压、电流和与功率，以及保护极限值(OCP, OVP)。

为避免误操作，可锁定旋钮。

输出值的预设

在不影响输出状态的前提下设置输出值，显示器上可显示预设值，即实际值的下方。

这样用户可预设所需输出电压、电流和功率，通过旋钮即可完成。

回读功能

本产品存有9组不同的预设电压、电流、功率、OVP(可调过压保护极限)与OCP(可调过流保护极限)。只需按一下按钮就可回读，这可避免频繁调节输出值。

三路接口

该接口位于PSI 5000系列产品的后板上，它有三个连接头：一个模拟接头，两个数字接头。

所有这三个连接头都能用于远程监控与控制本产品。模拟接头上的输入引脚接上0 V...10 V电压可控制0...100%的设定电压、电流与功率。

其输出引脚接上0 V...10 V电压可控制0...100%的输出电压与电流。还有几个输入与输出引脚可用来控制与监控产品状态。

Power

All models are equipped with a flexible auto-ranging output stage which provides a higher output voltage at lower output current, or a higher output current at lower output voltage, always limited to the max. nominal output power. The power set value is adjustable with these models. Therefore, a wide range of applications can already be covered by the use of just one single unit.

DC output

DC output voltages between 0...40 V and 0...200 V, output currents between 0...2 A and 0...40 A and output powers between 0...160 W and 0...640 W are available.

Current, voltage and power can be adjusted continuously between 0% and 100%, no matter if manually or remotely controlled (analog or digital).

The output terminal is located on the front panel. There is furthermore an additional output on the rear side on a screw terminal.

Protective features

For protection of the equipment connected, it is possible to set an overvoltage protection threshold (OVP), as well as one for overcurrent (OCP).

As soon as one of these thresholds is reached for any reason, the DC output will be immediately shut off and a status signal will be generated on the display and via the interfaces. There is furthermore an overtemperature protection, which will shut off the DC output if the device overheats.

Display and controls

Set values and actual values of output voltage and output current are clearly represented on the display.

Set values of voltage, current and power, as well as the protection thresholds (OCP, OVP) can be adjusted using the rotary knobs.

To prevent unintentional operations, the knobs can be locked.

Presetting of output values

To set output values without a direct reaction to the output condition, the set values are also shown on the display, positioned below the actual values.

With this, the user can preset required values for voltage, current and power. This is done by using the rotary knobs.

Recall feature

The device can store 9 different sets of preset values for voltage, current, power, OVP (adjustable overvoltage protection) and OCP (adjustable overcurrent protection). These can be recalled easily by the push of a button and help to avoid constant adjustment of the output values.

Three-way interface

This interface, which is located on the rear side of all models of PSI 5000 series, offers three connectors: one analog and two digital ones. All three can be used to remotely monitor and control the device.

The analog connector offers inputs to set voltage, current and power in the range of 0...100% through control voltages of 0V...10 V.

To monitor the output voltage and current, there are analog outputs with voltage ranges of 0 V...10 V. Also, several inputs and outputs are available for controlling and monitoring the device status.



数字接口为**USB**与**Ethernet**端口。可选择性使用，能远程控制产品，或者仅用于数据记录。

远程控制状态会显示在显示器上，此时所有按钮与旋钮，除本地按钮外，都被锁定。

USB端口无需设置，如果产品的IP地址上提供有以太网连接的网络参数，可在网站上设定它。

可选配件

- 安全插头一套（可通过电流最大32A，2个，红/黑），可安装在直流输出螺丝端上。可当非接触安全插座用。适合4 mm的插头。



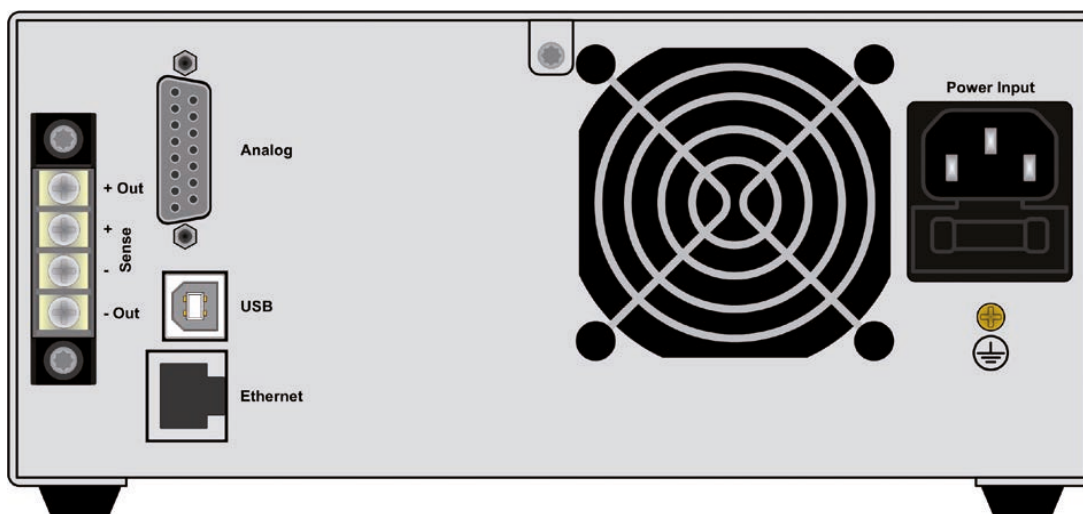
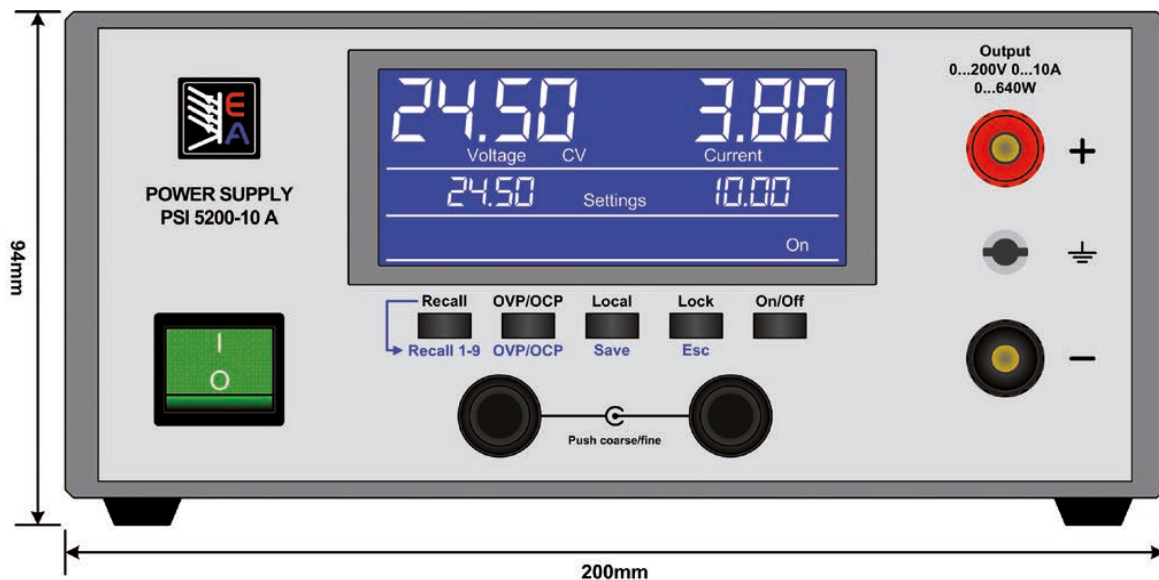
The digital interfaces are **USB** and **Ethernet**. They can be used alternatively to completely control the device remotely or just record data.

Remote control state is indicated in the display, while all buttons and knobs, except Local button, are locked.

For USB there is no setup required and the network parameters for Ethernet connection can be comfortably configured on a website, that if offered on the device's IP address.

Options

- Safety adapter set (max. 32 A, 2 pcs. red/black), mounted on top of the DC output screw-clamp terminal, used to achieve a non-contact safety socket. For 4 mm Büschel plug.



技术参数	Technical Data	PSI 5040-10 A	PSI 5080-05 A	PSI 5200-02 A	PSI 5040-20 A	PSI 5080-10 A
AC输入电压	Input voltage AC	90...264 V	90...264 V	90...264 V	90...264 V	90...264 V
- 频率	- Frequency	45...65 Hz	45...65 Hz	45...65 Hz	45...65 Hz	45...65 Hz
- 功率因数	- Power factor	>0.95	>0.95	>0.95	>0.97	>0.97
DC输出电压	Output voltage DC	0...40 V	0...80 V	0...200 V	0...40 V	0...80 V
- 0-100% 的负载调整率	- Load regulation 0-100% load	<0.08%	<0.08%	<0.08%	<0.08%	<0.08%
- ±10% ΔU _{AC} 的线性调整率	- Line regulation ±10% ΔU _{AC}	<0.02%	<0.02%	<0.02%	<0.02%	<0.02%
- 纹波 ⁽¹⁾	- Ripple ⁽¹⁾	<80 mV _{PP} <10 mV _{RMS}	<80 mV _{PP} <10 mV _{RMS}	<150 mV _{PP} <30 mV _{RMS}	<80 mV _{PP} <10 mV _{RMS}	<80 mV _{PP} <10 mV _{RMS}
- 负载从10%-100%调整需时	- Regulation 10-100% load	<1 ms	<1 ms	<1.5 ms	<1 ms	<1 ms
- 精确度 ⁽²⁾	- Accuracy ⁽²⁾	≤0.2%	≤0.2%	≤0.2%	≤0.2%	≤0.2%
输出电流	Output current	0...10 A	0...5 A	0...2 A	0...20 A	0...10 A
- 0-100% ΔU _{DC} 的负载调整率	- Load regulation 0-100% ΔU _{DC}	<0.15%	<0.15%	<0.15%	<0.15%	<0.15%
- ±10% ΔU _{AC} 的线性调整率	- Line regulation ±10% ΔU _{AC}	<0.02%	<0.02%	<0.02%	<0.02%	<0.02%
- 纹波 ⁽¹⁾	- Ripple ⁽¹⁾	<40 mA _{PP}	<20 mA _{PP}	<8 mA _{PP}	<80 mA _{PP}	<40 mA _{PP}
- 精确度 ⁽²⁾	- Accuracy ⁽²⁾	≤0.2%	≤0.2%	≤0.2%	≤0.2%	≤0.2%
输出功率	Output power	0...160 W	0...160 W	0...160 W	0...320 W	0...320 W
- 精确度 ⁽²⁾	- Accuracy ⁽²⁾	≤1%	≤1%	≤1%	≤1%	≤1%
制冷方式	Cooling	自然对流 / Convection			风扇 / Fan	风扇 / Fan
保护等级	Protection class	1				
工作温度	Operation temperature	0...50°C				
储存温度	Storage temperature	-20...70°C				
产品尺寸 (宽x高x长) ⁽³⁾	Dimensions ⁽³⁾ (WxHxD)	200x87x301 mm	200x87x301 mm	200x87x301 mm	200x87x301 mm	200x87x301 mm
重量	Weight	3 kg	3 kg	3 kg	3 kg	3 kg
订购编号	Ordering number	05100400	05100401	05100402	05100403	05100404

技术参数	Technical Data	PSI 5200-04 A	PSI 5040-40 A	PSI 5080-20 A	PSI 5200-10 A
AC输入电压	Input voltage AC	90...264 V	90...264 V	90...264 V	90...264 V
- 频率	- Frequency	45...65 Hz	45...65 Hz	45...65 Hz	45...65 Hz
- 功率因数	- Power factor	>0.97	>0.99	>0.99	>0.99
DC输出电压	Output voltage DC	0...200 V	0...40 V	0...80 V	0...200 V
- 0-100% ΔU _{DC} 的负载调整率	- Load regulation 0-100% load	<0.08%	<0.08%	<0.08%	<0.08%
- ±10% ΔU _{AC} 的线性调整率	- Line regulation ±10% ΔU _{AC}	<0.02%	<0.02%	<0.02%	<0.02%
- 纹波 ⁽¹⁾	- Ripple ⁽¹⁾	<150 mV _{PP} <30 mV _{RMS}	<80 mV _{PP} <10 mV _{RMS}	<80 mV _{PP} <10 mV _{RMS}	<150 mV _{PP} <30 mV _{RMS}
- 负载从10%-100%调整需时	- Regulation 10-100% load	<1.5 ms	<1 ms	<1 ms	<1.5 ms
- 精确度 ⁽²⁾	- Accuracy ⁽²⁾	≤0.2%	≤0.2%	≤0.2%	≤0.2%
输出电流	Output current	0...4 A	0...40 A	0...20 A	0...10 A
- 0-100% ΔU _{DC} 的负载调整率	- Load regulation 0-100% ΔU _{DC}	<0.15%	<0.15%	<0.15%	<0.15%
- ±10% ΔU _{AC} 的线性调整率	- Line regulation ±10% ΔU _{AC}	<0.02%	<0.02%	<0.02%	<0.02%
- 纹波 ⁽¹⁾	- Ripple ⁽¹⁾	<16 mA _{PP}	<160 mA _{PP}	<80 mA _{PP}	<32 mA _{PP}
- 精确度 ⁽²⁾	- Accuracy ⁽²⁾	≤0.2%	≤0.2%	≤0.2%	≤0.2%
输出功率	Output power	0...320 W	0...640 W	0...640 W	0...640 W
- 精确度 ⁽²⁾	- Accuracy ⁽²⁾	≤1%	≤1%	≤1%	≤1%
制冷方式	Cooling	风扇 / Fan			
保护等级	Protection class	1			
工作温度	Operation temperature	0...50°C			
储存温度	Storage temperature	-20...70°C			
产品尺寸 (宽x高x长) ⁽³⁾	Dimensions ⁽³⁾ (WxHxD)	200x87x301 mm	200x87x331 mm	200x87x331 mm	200x87x331 mm
重量	Weight	3 kg	4.3 kg	4.3 kg	4.3 kg
订购编号	Ordering number	05100405	05100406	05100407	05100408

