



EA-PSI 9000 3U 3.3 KW - 150 KW

重载型实验室直流电源 / HEAVY DUTY LABORATORY DC POWER SUPPLIES

**U
I
P
R**

OVP

OCP

OPP

OTP

Δ

19"

USB

DVI

MS

IFAB

WC

IEEE



EA-PSI 9200-210 3U

- 多相输入340...460 VAC 或 188...229 V_{AC} (US)
- 效率高达95.5%
- 输出功率有: 0...3.3 kW, 0...5 kW, 0...6.6 kW, 0...10 kW, 0...15 kW, 还可扩展至150 kW
- 输出电压: 0...40 V 至 0...1500 V
- 输出电流: 0...30 A 至 0...510 A
还可扩展至0...5100 A
- 灵活的功率调整输出
- 各种保护功能 (OVP, OCP, OPP, OTP)
- 直观的TFT触摸屏可显示数值、状态与通知
- 能自动检测的远程感测端
- 隔离模拟接口
 - 通过 0...10 V或0...5 V电压可对U / I / P编程
 - 通过 0...10 V或0...5 V电压可监控U / I
- 真实函数发生器
- 光伏方阵模拟功能
- 内阻模拟与调整
- 符合SELV标准 (EN 60950)的40 V产品型号
- 配放电电路(在10 s内U_{out} < 60 V)
- 内置USB端口
- 通过EN 61010 等级B EMC TÜV认证
- 可选数字接口模块或选择安装IEEE/GPIB端口
- 支持SCPI指令语言带菜单的图形显示器

- Multi-phase input 340...460 V_{AC} or 188...229 V_{AC} (US)
- High efficiency up to 95,5%
- Output power ratings: 0...3.3 kW, 0...5 kW, 0...6.6 kW, 0...10 kW, 0...15 kW, expandable up to 150 kW
- Output voltages: 0...40 V up to 0...1500 V
- Output currents: 0...30 A up to 0...510 A
Expandable up to 0...5100 A
- Flexible, power regulated output stage
- Various protection circuits (OVP, OCP, OPP, OTP)
- Intuitive TFT touch panel with display for values, status and notifications
- Remote sense with automatic detection
- Galvanically isolated, analog interface with
 - U / I / P programmable via 0...10 V or 0...5 V
 - U / I monitoring via 0...10 V or 0...5 V
- Integrated true function generator
- Photovoltaic array simulation
- Internal resistance simulation and regulation
- 40 V models according to SELV (EN 60950)
- Discharge circuit (U_{out} < 60 V in ≤ 10 s)
- USB port integrated
- EMC TÜV approved for EN 61010 Class B
- Optional, digital interface modules or alternatively installed IEEE/GPIB port
- SCPI command language supported

概要

EA-PSI 9000 3U 系列是一款由微处理器控制的高效实验室电源，其标准型号配备多种功能和特征。交互式菜单导航功能让用户使用起来极其方便、有效。

可对用户和进程文档进行编辑、存储，以及再次上载，从而改善重复测试或其它应用。

为了达到更大的输出功率，可配置高达150 kW和42U的机柜，以便满足客户需求。

General

The microprocessor controlled high efficiency laboratory power supplies of series EA-PSI 9000 3U offer multiple functions and features in their standard version. User-friendly, interactive menu navigation makes the use of this equipment remarkably easy and most effective.

User and process profiles can be edited, saved and archived so that the reproducibility of a test or other application is improved.

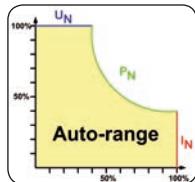
In order to achieve even higher output power, cabinets with up to 150 kW and up to 42U size can be configured to suit the user's requirements.

交流输入

本系列所有型号都采用主动式PFC功率因数校正线路，专为在340 V至460 V AC（欧标型号）或188 V至229 V AC（美标型号）三相供电条件下操作而设计。

功率自动调整

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。本系列的最大功率值可调，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...1500 V输出电压，0...40 A和0...510 A输出电流，0...3.3 kW，0...5 kW，0...6.6 kW，0...10 kW或0...15 kW输出功率的各个型号。输出端位于产品后板。

放电电路

额定输出电压为200 V或以上的产品对其输出电容配有一放电电路。在空载或带很小负载的情况下，它能保证危险的输出电压在直流输出关闭后降至60 V DC以下。该电压值被认为是对人身安全有危险的极限电压。

保护功能

为保护连接负载，可设定一过压保护极限值(OVP)，以及过流(OCP)与过功率(OPP)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，在显示器和接口端还会发出一状态信号。

本产品还有过温保护，如果产品过热，它会关断直流输出。

远程感测

远程感测输入端可直接连到负载设备，以补偿连线上一定程度的压降。如果感测输入端已接到负载上，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。

扩展功能

按照客户需求可将多个单机产品进行不同的组合，能装入最高为42U的机柜，从而获得高达150 kW的总功率。

本产品标配并联链接模式。使用内置主从总线，在主机上可形成总功率、总电压与总电流。也可见145页说明。

模拟接口

产品后面板上装有一隔离模拟接口。它提供模拟接口输入脚，接上0 V...10 V或0 V...5 V控制电压，可设置0...100%的设定电压、电流与功率。

模拟输出脚接上0 V...10 V或0 V...5 V电压，可监控输出电压与电流。此外，还有几个输入脚和输出脚，可用来控制和监控产品状态。

AC input

All models are provided with an active Power Factor Correction circuit and are designed for a usage on a three-phase supply with 340 V up to 460 V AC (european models) or 188V up to 229V AC (US models).

Auto-ranging power stage

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 unit.

DC output

DC output voltages between 0...40 V and 0...1500 V, output currents between 0...40 A and 0...510 A and output power ratings of 0...3.3 kW, 0...5 kW, 0...6.6 kW, 0...10 kW or 0...15 kW are available. The output terminal is located on the rear panel.

Discharge circuit

Models with a nominal output voltage of 200 V or higher include a discharge circuit for the output capacities. For no load or low load situations, it ensures that the dangerous output voltage can sink to under 60 V DC after the DC output has been switched off. This value is considered as limit for voltages dangerous to human safety.

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) and overpower (OPP). 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.

Remote sensing

The standard sense input can be connected directly to the load in order to compensate voltage drops along the power cables up to a certain level. If the sensing input is connected to the load, the power supply will adjust the output voltage automatically to make ensure the accurate required voltage is available at the load.

Extensibility

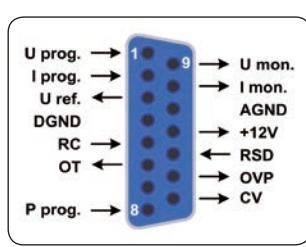
The singles units can be combined into various configurations upon request, also in cabinets of up to 42U, in order to build systems of up to 150 kW total power.

Parallel connection is the standard connection mode and there will be total formation of power, voltage and current on the main unit, by using the standard built-in master-slave bus. Also see page 145.

Analog interface

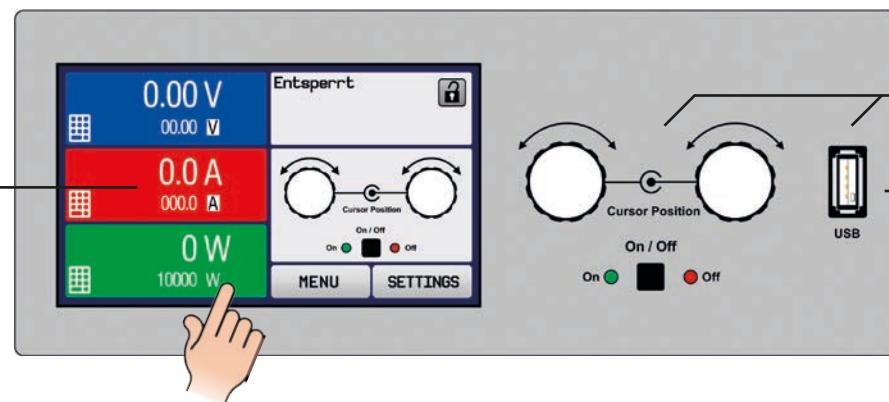
There is a galvanically isolated analog interface terminal, located on the rear of the device. It offers analog inputs to set voltage, current and power from 0...100% through control voltages of 0 V...10 V or 0 V...5 V.

To monitor the output voltage and current, there are analog outputs with voltage ranges of 0 V...10 V or 0 V...5 V. Also, several inputs and outputs are available for controlling and monitoring the device status.



显示器与控制面板

触摸屏显示器
Display with touch panel



参数调节用旋钮
Knobs for comfortable value adjustment

上传与保存函数用USB端口
USB port for loading and saving functions

设定与实际输出电压、电流与功率都清晰显示于彩屏上。彩色的TFT屏幕为触摸式，用手指能控制产品所有功能。

通过旋钮，或者数字键盘直接输入参数，也可调节设定电压、电流、功率或阻止（内阻模拟）。

若想防止意外操作，可锁定所有操作键。

Display and control panel

Set values and actual values of output voltage, output current and output power are clearly represented on the graphic display. The colour TFT screen is touch sensitive and can be intuitively used to control all functions of the device with just a finger. Set values of voltage, current, power or resistance (internal resistance simulation) can be adjusted using the rotary knobs or entered directly via a numeric pad. To prevent unintentional operations, all operation controls can be locked.

多语言控制面板 / Multi-language control panel



英文 / English



中文 / Chinese



俄文 / Russian



德文 / German

函数发生器

本系列产品都具有一可形成如下典型函数的真实函数发生器，并能将这些函数曲线应用于输出电压或输出电流上。发生器可通过前板的触摸屏设置或某一数字接口远程配置。

预定义函数会为用户提供所有必要的参数，如Y偏差值，时间/频率或幅度，一套完整的配置参数。

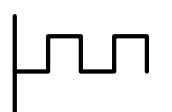
Function generator

All models within this series include a true function generator which can generate typical functions, as displayed in the figure below, and apply them to either the output voltage or the output current. The generator can be completely configured and controlled by using the touch panel on the front of the device, or by remote control via one of the digital interfaces.

The predefined functions offer all necessary parameters to the user, such as Y offset, time / frequency or amplitude, for full configuration ability.



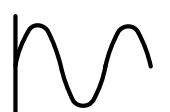
Dreieck
三角形



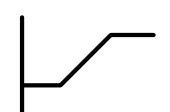
Rechteck
矩形



Trapez
梯形



Sinus
正弦



Rampe
坡行

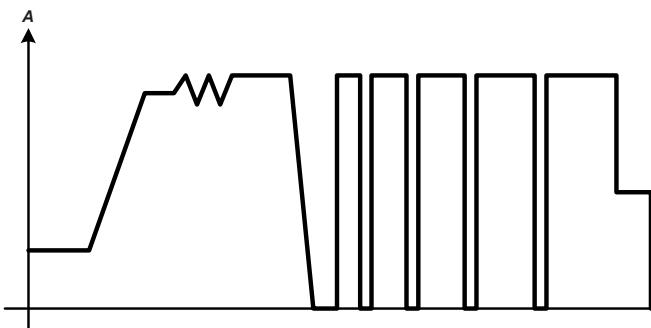


DIN 40839

除了基于任意发生器产生的标准函数外，它还可形成某些复杂的函数，并分为多达100组序列。这些一般用于研发和生产的测试上。

通过前板的USB端口可将这些序列上载使用或存储于一标准U盘上，这样方便更换不同的测试序列。

下图是一个任意发生器可实现的由40个序列组成的复杂曲线，仅为虚构范例。可以在产品外面或者于产品上创建，然后上载使用或保存：



此外还有一个XY发生器，能产生如UI或IU这类的函数，一般用户以表格（CSV文档）形式定义，然后从U盘上上传。

针对光伏相关的测试，还可形成PV曲线，当做用户可调关键参数。

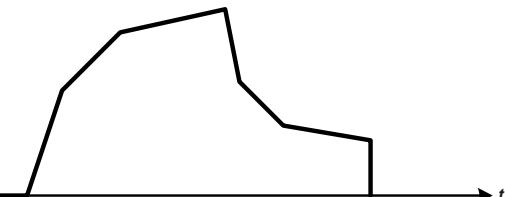
甚至通过后续的固件升级，可安装更多的曲线特性，供用户选择。



Additionally to the standard functions, which are all based upon a so-called arbitrary generator, this base generator is accessible for the creation and execution of complex sets of functions, separated into up to 100 sequences. Those can be used for testing purpose in development and production.

The sequences can be loaded from and saved to a standard USB flash drive via the USB port on the front panel, making it easy to change between different test sequences.

The figure below shows a fictional example of a complex function of 40 sequences, as it can be realised with the arbitrary generator. The function can be created on the device or externally and then loaded or saved:



There is furthermore a XY generator, which is used to generate other functions like UI or IU, which are defined by the user in form of tables (CSV file) and then loaded from USB drive.

For photovoltaics related tests, a PV curve can be generated and used from user-adjustable key parameters.

Even more characteristics can be installed for user selection by applying future firmware updates.

主-从总线

所有产品默认有一个串联主从总线。通过它可并联最多的10台同型号产品，或串联起来，将实际电压、电流与功率累加，成更大的系统。该操作完全可由产品控制面板完成，或远程控制（经数字通讯接口）完成。

控制软件

本产品还配有适合Windows系统下操作的控制软件，可以远程控制多台同型号产品，甚至不同型号产品。有一个界面显示所有设定值与实际值，SCPI与ModBus指令的直接输入模式，固件升级功能，以及被命名为“排序”的半自动化控制表格。

选购件

- 适合RS232、CAN、CANopen、Modbus TCP、Profibus、Profinet/I/O、Devicenet或Ethernet的绝缘数字接口模块。接口插槽位于产品后板（仅针对标准型号），方便用户插上新模块或替换当前模块。产品会自动检测接口，并提示需要进行少许的配置或不用配置。也可参考138页。

- 还可安装带固定GPIB端口的三位接口（3 W），而非接口模块用的默认插槽
- 高速跃变（仅针对1 kW以上产品，见151页）*
- 水冷模块**

*并非针对所有电压 - 请咨询获取更多信息

**一般只有200 V以下型号才有，按需也可针对其它型号

Master-slave

All models feature a digital master-slave bus by default. It can be used to connect up to 16 units of identical models in parallel operation to a bigger system with totals formation of the actual value of voltage, current and power. The configuration of the master-slave system is either completely done on the control panels of the units or by remote control via any of digital communication interfaces. Handling of the master unit is possibly by manual or remote control (any interface).

Control software

Included with the device is a control software for Windows PC, which allows for the remote control of multiple identical or even different types of devices. It has a clear interface for all set and actual values, a direct input mode for SCPI and ModBus commands, a firmware update feature and the semi-automatic table control named “Sequencing”.

Options

- Digital interface modules for RS232, CAN, CANopen, Modbus TCP, Profibus, Profinet/I/O, Devicenet or Ethernet. The interface slot is located on the rear panel (standard models only), 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. See page 138.
- Three-way interface (3 W) with a rigid GPIB port installed instead of the default slot for retrofittable interface modules.
- High Speed ramping (see page 151) *
- Water Cooling **

* not for all voltages - please enquire for availability

** generally available for models up to 200 V, for other models upon request



EA-PSI 9000 3U 3.3 KW - 150 KW

重载型实验室直流电源 / HEAVY DUTY LABORATORY DC POWER SUPPLIES

| 技术参数 | Technical Data | Series EA-PSI 9000 3U / 系列 |
|-----------------------------------|--|--|
| AC输入电压 | Input AC | |
| - 电压 | - Voltage standard | 欧标型号 / European models: 340...460 V, 2ph/3ph 美标型号 / US models: 188...229 V, 2ph/3ph |
| - 频率 | - Frequency | 45...65 Hz |
| - 功率因数 | - Power factor | >0.99 |
| DC输出电压 | Output voltage DC | |
| - 精确度 | - Accuracy | <0.1% |
| - 0-100% 的负载调整率 | - Load regulation 0-100% | <0.05% |
| - $\pm 10\% \Delta U_{AC}$ 的线性调整率 | - Line regulation $\pm 10\% \Delta U_{AC}$ | <0.02% |
| - 负载从10%-100%调整需时 | - Regulation 10-100% load | <2 ms |
| - 负载从10-90%上升需时 | - Slew rate 10-90% | 最长30 ms |
| - 过压保护 | - Overvoltage protection | 可调, 范围为0...110% U_{nenn} / Adjustable, 0...110% U_{nom} |
| - 直流端关闭时空载放电需时 | - No load discharge time on DC off | 100%电压降至60 V以下: 少于10 s / 100% U to <60 V: less than 10 s |
| 输出电流 | Output current | |
| - 精确度 | - Accuracy | <0.2% |
| - 0-100% ΔU_{DC} 时的负载调整率 | - Load regulation 0-100% ΔU_{DC} | <0.15% |
| - $\pm 10\% \Delta U_{AC}$ 的线性调整率 | - Line regulation $\pm 10\% \Delta U_{AC}$ | <0.05% |
| 输出功率 | Output power | |
| - 精确度 | - Accuracy | <1% |
| 过压类别 | Overvoltage category | 2 |
| 保护功能 | Protection | OT, OVP, OPP, PF, OCP ⁽²⁾ |
| 隔离耐压 | Isolation | |
| - 输入对外壳 | - Input to enclosure | 2500 V DC |
| - 输入对输出 | - Input to output | 2500 V DC |
| - 输出对外壳 | - Output to enclosure (PE) | 根据型号不同而不同, 详见后面表格 / Depending on model, see model table |
| 污染等级 | Pollution degree | 2 |
| 保护级别 | Protection class | 1 |
| 显示器与面板 | Display and panel | 带触摸屏的图形显示器 / Graphics display with touch panel |
| 数字接口 | Digital interfaces | |
| - 内置型 | - Built-in | 1x 通讯用A型USB / 1x USB type B for communication 1x GPIB (带3 W可选功能) / 1x GPIB (optional with option 3 W) |
| - 插槽型 | - Slot | 1x 可更换的插入式模块 (仅针对标准型号) / 1x for retrofittable plug-in modules (standard models only) |
| 模拟编程 | Analog interface | 内置15针D-Sub母插 / Built in, 15-pole D-Sub, female |
| - 输入范围 | - Input range | 0...5 V 或 0...10 V (可转换) / 0...5 V or 0...10 V (switchable) |
| - U/I/P/R的精确度 | - Accuracy U/I/P/R | 0...10 V: <0.1% 0...5 V: <0.2% |
| - 控制信号 | - Control signals | 远程开-关, 直流输出开-关, 内阻模式开-关 / Remote on-off, DC output on-off, resistance mode on-off |
| - 状态信号 | - Status signals | 过压 / Overvoltage, 过温 / Overtemperature |
| 串联操作 | Series operation | 可实现, 但取决于直流负极对地的隔离耐压 / Possible, but depending on the isolation of DC- against PE |
| 并联操作 | Parallel operation | 可实现, 通过真实主从操作, 可连接多达10台产品 / Yes, with true master-slave, up to 10 units |
| 安全标准 | Standards | EN 61326, IEC 1010, EN 61010 EMC通过TÜV认证, 且符合 / EMC TÜV approved according to IEC 61000-6-2:2005 IEC 61000-6-3:2006 等级 B |
| 制冷 | Cooling | 风扇, 也可选: 水冷 / Fans (optional: water) |
| 工作温度 | Operation temperature | 0...50°C |
| 储存温度 | Storage temperature | -20...70°C |
| 相对湿度 | Relative humidity | <80%, 无凝结 / <80%, non-condensing |
| 使用高度 | Operation altitude | <2000 m |
| 产品尺寸 (宽x高x长)⁽¹⁾ | Dimensions (W H D)⁽¹⁾ | 19" 3 HE/U 609 mm |

(1) 仅为外壳尺寸, 非产品整体尺寸 / Enclosure only, not overall

(2) 见第152页 / See page 152

| 技术参数 | Technical Data | PSI 9040-170 3U | PSI 9080-170 3U | PSI 9200-70 3U | PSI 9360-40 3U |
|---------------------|-------------------------------------|--|--|--|--|
| DC输出电压 | Output voltage DC | 0...40 V | 0...80 V | 0...200 V | 0...360 V |
| - 纹波 ⁽¹⁾ | - Ripple ⁽¹⁾ | <200 mV _{PP} <16 mV _{RMS} | <200 mV _{PP} <16 mV _{RMS} | <300 mV _{PP} <40 mV _{RMS} | <320 mV _{PP} <55 mV _{RMS} |
| - 感测端电压补偿 | -Sense compensation | ~ 1 V | ~ 2 V | ~ 5 V | ~ 7.5 V |
| 隔离电压 | Isolation | | | | |
| - 输出负极 <-> PE | - Negative output <-> PE | ±400 V DC | ±400 V DC | ±400 V DC | ±400 V DC |
| - 输出正极 <-> PE | - Positive output <-> PE | ±400 V DC | ±400 V DC | ±600 V DC | ±600 V DC |
| 输出电流 | Output current | 0...170 A | 0...170 A | 0...70 A | 0...40 A |
| - 纹波 ⁽¹⁾ | - Ripple ⁽¹⁾ | <80 mA _{RMS} | <80 mA _{RMS} | <22 mA _{RMS} | <18 mA _{RMS} |
| 输出功率 | Output power | 0...3300 W | 0...5000 W | 0...5000 W | 0...5000 W |
| 效率 | Efficiency | ~93% | ~93% | ~95% | ~93% |
| U的编程分辨率 | Programming resolution U | ≤2 mV | ≤4 mV | ≤9 mV | ≤15 mV |
| I的编程分辨率 | Programming resolution I | ≤7 mA | ≤7 mA | ≤3 mA | ≤2 mA |
| 重量 ⁽²⁾ | Weight ⁽²⁾ | ~ 17 kg | ~ 17 kg | ~ 17 kg | ~ 17 kg |
| 订购编号 ⁽³⁾ | Ordering number Euro ⁽³⁾ | 06230350 | 06230351 | 06230352 | 06230353 |
| 订购编号 ⁽³⁾ | Ordering number US ⁽³⁾ | 06238350 | 06238351 | 06238352 | 06238353 |

| 技术参数 | Technical Data | PSI 9500-30 3U | PSI 9750-20 3U | PSI 9040-340 3U | PSI 9040-510 3U |
|---------------------|-------------------------------------|--|---|--|--|
| DC输出电压 | Output voltage DC | 0...500 V | 0...750 V | 0...40 V | 0...40 V |
| - 纹波 ⁽¹⁾ | - Ripple ⁽¹⁾ | <350 mV _{PP} <70 mV _{RMS} | <800 mV _{PP} <200 mV _{RMS} | <320 mV _{PP} <25 mV _{RMS} | <320 mV _{PP} <25 mV _{RMS} |
| - 感测端电压补偿 | -Sense compensation | ~ 10 V | ~ 15 V | ~ 1 V | ~ 1 V |
| 隔离电压 | Isolation | | | | |
| - 输出负极 <-> PE | - Negative output <-> PE | ±725 V DC | ±725 V DC | ±400 V DC | ±400 V DC |
| - 输出正极 <-> PE | - Positive output <-> PE | ±1000 V DC | ±1000 V DC | ±400 V DC | ±400 V DC |
| 输出电流 | Output current | 0...30 A | 0...20 A | 0...340 A | 0...510 A |
| - 纹波 ⁽¹⁾ | - Ripple ⁽¹⁾ | <16 mA _{RMS} | <16 mA _{RMS} | <160 mA _{RMS} | <120 mA _{RMS} |
| 输出功率 | Output power | 0...5000 W | 0...5000 W | 0...6600 W | 0...10000 W |
| 效率 | Efficiency | ~95.5% | ~94% | ~93% | ~93% |
| U的编程分辨率 | Programming resolution U | ≤21 mV | ≤31 mV | ≤2 mV | ≤2 mV |
| I的编程分辨率 | Programming resolution I | ≤2 mA | ≤1 mA | ≤14 mA | ≤21 mA |
| 重量 ⁽²⁾ | Weight ⁽²⁾ | ~ 17 kg | ~ 17 kg | ~ 24 kg | ~ 30 kg |
| 订购编号 ⁽³⁾ | Ordering number Euro ⁽³⁾ | 06230354 | 06230355 | 06230356 | 06230363 |
| 订购编号 ⁽³⁾ | Ordering number US ⁽³⁾ | 06238354 | 06238355 | 06238356 | 06238363 |

| 技术参数 | Technical Data | PSI 9080-340 3U | PSI 9200-140 3U | PSI 9360-80 3U | PSI 9500-60 3U |
|---------------------|-------------------------------------|--|--|--|--|
| DC输出电压 | Output voltage DC | 0...80 V | 0...200 V | 0...360 V | 0...500 V |
| - 纹波 ⁽¹⁾ | - Ripple ⁽¹⁾ | <320 mV _{PP} <25 mV _{RMS} | <300 mV _{PP} <40 mV _{RMS} | <320 mV _{PP} <55 mV _{RMS} | <350 mV _{PP} <70 mV _{RMS} |
| - 感测端电压补偿 | -Sense compensation | ~ 2 V | ~ 5 V | ~ 7.5 V | ~ 10 V |
| 隔离电压 | Isolation | | | | |
| - 输出负极 <-> PE | - Negative output <-> PE | ±400 V DC | ±400 V DC | ±400 V DC | ±725 V DC |
| - 输出正极 <-> PE | - Positive output <-> PE | ±400 V DC | ±600 V DC | ±600 V DC | ±1000 V DC |
| 输出电流 | Output current | 0...340 A | 0...140 A | 0...80 A | 0...60 A |
| - 纹波 ⁽¹⁾ | - Ripple ⁽¹⁾ | <160 mA _{RMS} | <44 mA _{RMS} | <35 mA _{RMS} | <32 mA _{RMS} |
| 输出功率 | Output power | 0...10000 W | 0...10000 W | 0...10000 W | 0...10000 W |
| 效率 | Efficiency | ~93% | ~95% | ~93% | ~95% |
| U的编程分辨率 | Programming resolution U | ≤4 mV | ≤9 mV | ≤15 mV | ≤21 mV |
| I的编程分辨率 | Programming resolution I | ≤14 mA | ≤6 mA | ≤4 mA | ≤3 mA |
| 重量 ⁽²⁾ | Weight ⁽²⁾ | ~ 24 kg | ~ 24 kg | ~ 24 kg | ~ 24 kg |
| 订购编号 ⁽³⁾ | Ordering number Euro ⁽³⁾ | 06230357 | 06230358 | 06230359 | 06230360 |
| 订购编号 ⁽³⁾ | Ordering number US ⁽³⁾ | 06238357 | 06238358 | 06238359 | 06238360 |

(1) RMS值: 在BWL 300KHz时测量的LF值, PP值: 在BWL 20MHz时测量的HF值 / RMS value: measures at LF with BWL 300 kHz, PP value: measured at HF with BWL 20MHz

(2) 针对标准型号, 带可选件的重量会不同 / of standard version, models with options may vary

(3) 标准型号的订购编码, 带3 W选项功能的编码则会不同 / Ordering number of the base version, models with options installed have different ordering numbers.

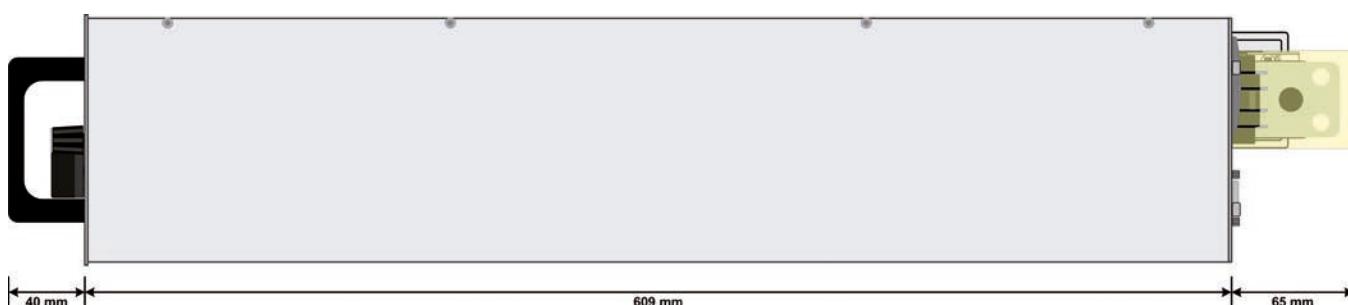
| 技术参数 | Technical Data | PSI 9750-40 3U | PSI 91000-30 3U | PSI 9080-510 3U | PSI 9200-210 3U |
|--------------------------|-------------------------------------|---|--|--|--|
| DC输出电压 | Output voltage DC | 0...750 V | 0...1000 V | 0...80 V | 0...200 V |
| - 纹波 ⁽¹⁾ | - Ripple ⁽¹⁾ | <800 mV _{PP} <200 mV _{RMS} | <1600 mV _{PP} <350 mV _{RMS} | <320 mV _{PP} <25 mV _{RMS} | <300 mV _{PP} <40 mV _{RMS} |
| - 感测端电压补偿 | -Sense compensation | ~ 15 V | ~ 20 V | ~ 2.5 V | ~ 6 V |
| 隔离电压 | Isolation | | | | |
| - 输出负极 <-> PE | - Negative output <-> PE | ±725 V DC | ±725 V DC | ±400 V DC | ±400 V DC |
| - 输出正极 <-> PE | - Positive output <-> PE | ±1000 V DC | ±1000 V DC | ±400 V DC | ±600 V DC |
| 输出电流 | Output current | 0...40 A | 0...30 A | 0...510 A | 0...210 A |
| - 纹波 ⁽¹⁾ | - Ripple ⁽¹⁾ | <32 mA _{RMS} | <22 mA _{RMS} | <240 mA _{RMS} | <66 mA _{RMS} |
| 输出功率 | Output power | 0...10000 W | 0...10000 W | 0...15000 W | 0...15000 W |
| 效率 | Efficiency | ~94% | ~95% | ~93% | ~95% |
| U的编程分辨率 | Programming resolution U | ≤31 mV | ≤41 mV | ≤4 mV | ≤9 mV |
| I的编程分辨率 | Programming resolution I | ≤2 mA | ≤2 mA | ≤21 mA | ≤9 mA |
| 重量 ⁽²⁾ | Weight ⁽²⁾ | ~ 24 kg | ~ 24 kg | ~ 30 kg | ~ 30 kg |
| 欧版订购编号 ⁽³⁾ | Ordering number Euro ⁽³⁾ | 06230361 | 06230362 | 06230364 | 06230365 |
| 美版订购编号 ⁽³⁾ | Ordering number US ⁽³⁾ | 06238361 | 06238362 | 06238364 | 06238365 |

| 技术参数 | Technical Data | PSI 9360-120 3U | PSI 9500-90 3U | PSI 9750-60 3U | PSI 91500-30 3U |
|--------------------------|-------------------------------------|--|--|---|--|
| DC输出电压 | Output voltage DC | 0...360 V | 0...500 V | 0...750 V | 0...1500 V |
| - 纹波 ⁽¹⁾ | - Ripple ⁽¹⁾ | <320 mV _{PP} <55 mV _{RMS} | <350 mV _{PP} <70 mV _{RMS} | <800 mV _{PP} <200 mV _{RMS} | <2400 mV _{PP} <400 mV _{RMS} |
| - 感测端电压补偿 | -Sense compensation | ~ 7.5 V | ~ 10 V | ~ 15 V | ~ 30 V |
| 隔离电压 | Isolation | | | | |
| - 输出负极 <-> PE | - Negative output <-> PE | ±400 V DC | ±725 V DC | ±725 V DC | ±725 V DC |
| - 输出正极 <-> PE | - Positive output <-> PE | ±600 V DC | ±1000 V DC | ±1000 V DC | ±1500 V DC |
| 输出电流 | Output current | 0...120 A | 0...90 A | 0...60 A | 0...30 A |
| - 纹波 ⁽¹⁾ | - Ripple ⁽¹⁾ | <50 mA _{RMS} | <48 mA _{RMS} | <48 mA _{RMS} | <26 mA _{RMS} |
| 输出功率 | Output power | 0...15000 W | 0...15000 W | 0...15000 W | 0...15000 W |
| 效率 | Efficiency | ~93% | ~95% | ~94% | ~95% |
| U的编程分辨率 | Programming resolution U | ≤15 mV | ≤21 mV | ≤31 mV | ≤61 mV |
| I的编程分辨率 | Programming resolution I | ≤5 mA | ≤4 mA | ≤3 mA | ≤2 mA |
| 重量 ⁽²⁾ | Weight ⁽²⁾ | ~ 30 kg | ~ 30 kg | ~ 30 kg | ~ 30 kg |
| 欧版订购编号 ⁽³⁾ | Ordering number Euro ⁽³⁾ | 06230366 | 06230367 | 06230368 | 06230369 |
| 美版订购编号 ⁽³⁾ | Ordering number US ⁽³⁾ | 06238366 | 06238367 | 06238368 | 06238369 |

(1) RMS值: 在BWL 300KHz时测量的LF值, PP值: 在BWL 20MHz时测量的HF值 / RMS value: measures at LF with BWL 300 kHz, PP value: measured at HF with BWL 20MHz

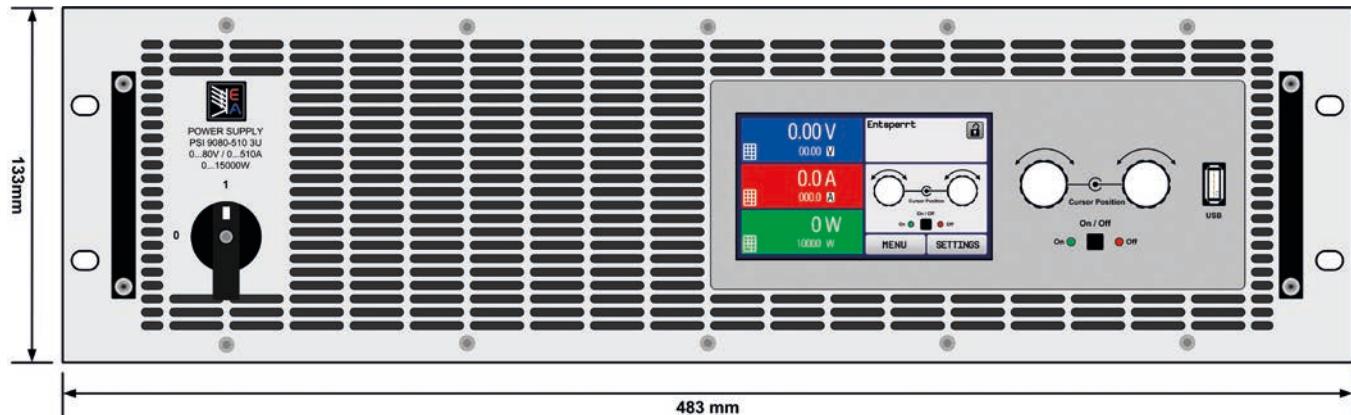
(2) 针对标准型号, 带可选件的重量会不同 / of standard version, models with options may vary

(3) 标准型号的订购编码, 带3 W选项功能的编码则会不同 / Ordering number of the base version, models with options installed have different ordering numbers.



数字接口 / Digital interfaces





USB与模拟接口

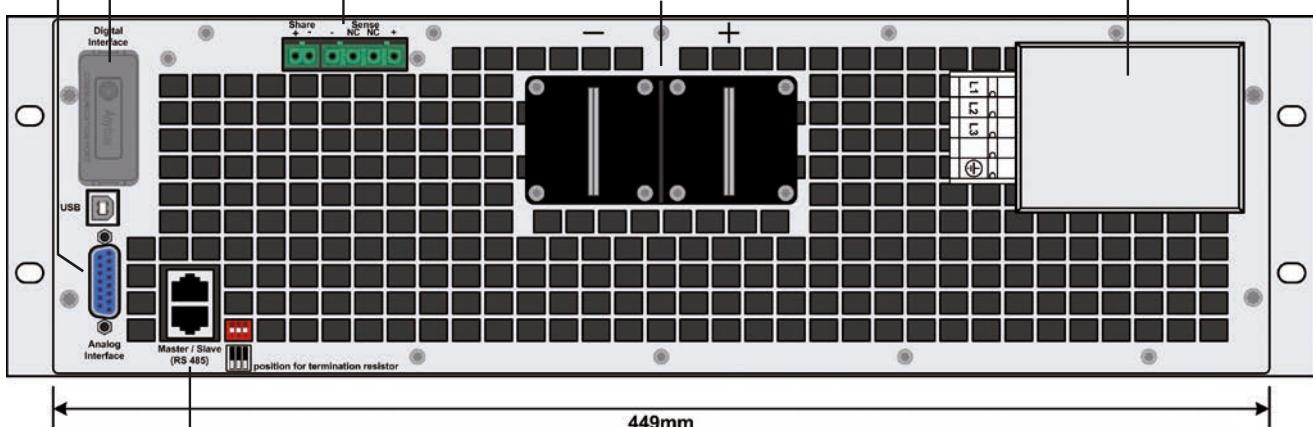
USB and analog interface

数字接口卡插槽

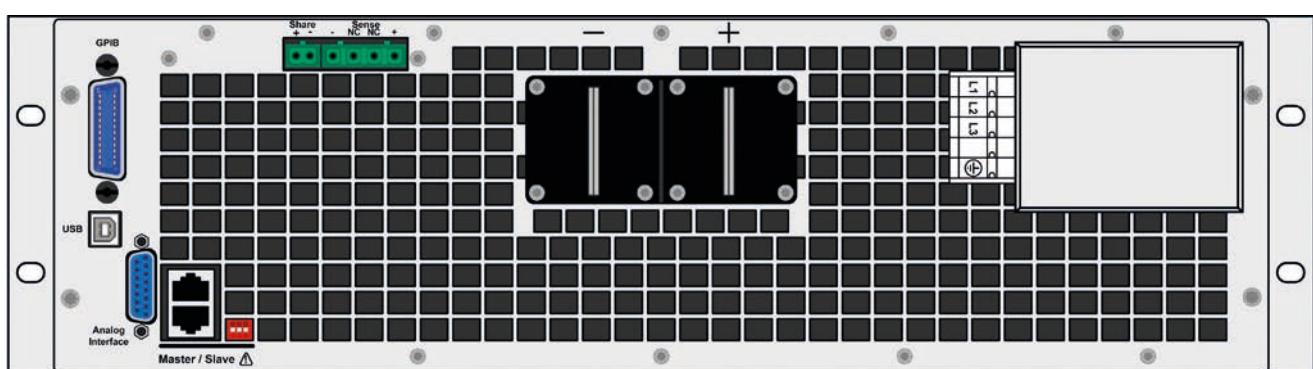
Slot for digital interfaces

共享总线端&感测端

Terminals for Share bus & sense

直流输出端
DC output交流输入端带内部滤波器（欧版）
AC input with inline filter (EU version)

标准型号后视图 / Rear view of base model



配3 W选项功能型号后视图 / Rear view with option 3 W