

EA-PS 3000 C 160 W - 640 W



可编程桌面式直流电源 Programmable desktop DC Power supplies



EA-PSI 9080-60 DT

U **I** **P** **OVP** **OCP** **OPP** **OTP**

Option: **USB** **LAN**

- 宽范围的输入电压：90...264 V，带主动式PFC
- 额定输出功率：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
- 灵活的可调整输出
- 监控功能 (OVP, OCP, OPP)
- 过温保护 (OT)
- 远程感测
- 彩色显示器显示数值、状态与通知
- 可选隔离接口 (模拟式 / 数字式)
- 放电电路
- 支持SCPI与ModBus RTU
- 支持LabView VI

- Wide input voltage range 90...264 V with active PFC
- 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
- Supervision (OVP, OCP, OPP)
- Overtemperature protection (OT)
- Remote sensing
- Colour display for values, status and notifications
- Optional, galvanically isolated interfaces (analog / digital)
- Discharge circuit ($U_{out} < 60 V$ in $\leq 10 s$)
- SCPI and ModBus RTU supported
- LabView VI supported

一般信息

EA-PS 3000 C新系列为用户带来一款紧凑的桌面式电源产品，能广泛应用于需求小电压、电流与功率的场合。小巧的外壳、彩色的控制面板、前板可触直流输出设置端口，连接和操作都很方便。

除了电源的标准功能外，还有额外的功能可以简化操作，并节省时间。设定数值除了用旋钮调节外，用户还可快速设置几个保护极限，调出用户配置文档。

General

The new series EA-PS 3000 C offers the user compact desktop power supply devices for a manifold of applications where it requires small voltages, currents and powers. The small enclosure dimensions, the intuitive control panel with the colour display and the front side accessible DC output facilitate setup, connection and handling on place.

Besides standard features of power supplies these devices offer some additional functions to simplify handling and to save time. Apart from set value adjustment with knobs, the user can also quickly configure several protection thresholds and call user profiles.

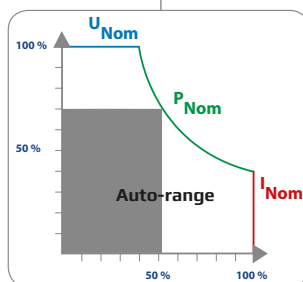
EA-PS 3000 C 160 W - 640 W

交流供电

本系列产品使用主动式功率因素校正（简称：PFC），使之能够在宽范围的输入电压 $90 V_{AC}$ 至 $264 V_{AC}$ 之间都能使用elegt.

功率级别自动调整

本系列所有型号的输出功率都可灵活调整。可在较低电流时输出较高电压，或在低电压时输出较高电流，但总是维持在最大额定功率范围内。它们的最大设定功率都可调，因此仅用一台产品就能覆盖广泛的应用。



直流输出

本系列有 $0...40 V$ 和 $0...200 V$ 输出电压， $0...2 A$ 和 $0...40 A$ 输出电流， $0...160 W$ 和 $0...640 W$ 输出功率的不同型号。

因此不管是手动控制还是远程控制（模拟或数字），都可在 0% 与 100% 之间连续调节电流、电压与功率。输出端位于产品前面板上。

保护功能

为保护连接设备，可给产品设定一过压保护限值(OVP)，以及过流(OCP)与过功率(OPP)保护限值。

一旦因故超过这三个值中的一个，直流输出会被立即切断，并在显示器与接口端发出一状态信号。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，以补偿连线上的部分压降。如果感测输入端已接到负载上，本电源会自动调整输出电压，以确保负载获得准确所需的电压值。

HMI操作

本产品的手动操作通过一个彩色显示器、两个旋钮以及六个按钮完成。大显示器会一次性显示所有有关设定值与实际值。真个设置通过人机界面完成。可显示多种语言（德文，英文，俄文，中文）。

远程控制 & 连接

要进行远程控制，可从三种接口卡中选取，用户都可在现场快速并轻松地安装：**USB**，**USB + Ethernet**（以太网），**USB + Analog**（模拟）。

使用数字接口（**USB**，以太网），用户可从免费版软件“EA Power Control”中获利。它具有一功能，称作“排序”，产品可由CSV格式的半自动表格来控制。该表展示的是简易测试步骤，可以在**MS Excel**或其它**CSV**编辑器下创建与编辑，然后导入软件工具内。

这个软件允许利用“多台控制”（需注册码，非免费）可选特征，一次性控制多达**20**台产品。更多信息可参考**136**页。

AC supply

The equipment uses an active **Power Factor Correction** (short: PFC), enabling worldwide use on a mains input from $90 V_{AC}$ up to $264 V_{AC}$.

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 maximum 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 $0...200 V$, output currents between $0...2 A$ and $0...40 A$ and output power ratings between $0...160 W$ and $0...640 W$ are available.

Current, voltage and power can thus be adjusted continuously between 0% and 100% , no matter if manually or remotely controlled (analog or digital). The output terminals are located on the front side of the devices.

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 sensing input can be connected directly to the load in order to compensate voltage drops along the cables. If the sensing 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.

Handling (HMI)

Manual operation is done with a colour display, two rotary knobs and six pushbuttons. The large display shows all relevant set values and actual values at a glance. The whole setup is also done with the human-machine interface. The display is multilingual (German, English, Russian, Chinese).

Remote control & connectivity

For remote control, there are three types of interface cards optionally available which can be quickly and easily installed by user on location: **USB**, **USB + Ethernet**, **USB + Analog**.

Using the digital interface (**USB**, **Ethernet**), Windows users can profit from the free software “EA Power Control”. It offers a feature called “Sequencing”, where the device is controlled through a semi-automatic table in CSV format. This table represents a simple test procedure and can be created and edited in MS Excel or other CSV editors and then imported into the software tool.

This software also allows for the control of up to **20** units at once with an optional feature called “Multi Control” (licensed, not free of charge). See page **136** for more information.



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选项

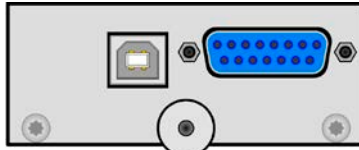
- USB接口卡 (订购编号: 33100232)
- USB+以太网接口卡 (订购编号: 33100233)
- USB+模拟端口接口卡 (订购编号: 33100234)

Options

- Interface card USB (ordering number: 33100232)
- Interface card USB+Ethernet (ordering number: 33100233)
- Interface card USB+Analog port (ordering number: 33100234)



USB

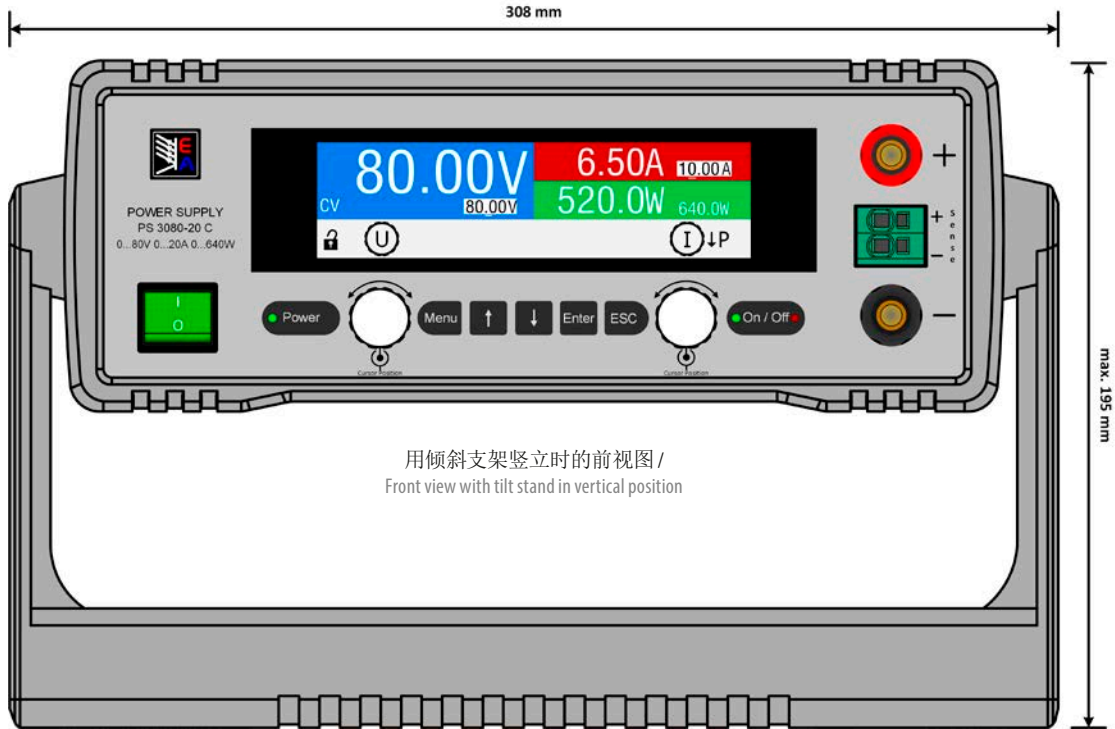


USB+ANALOG

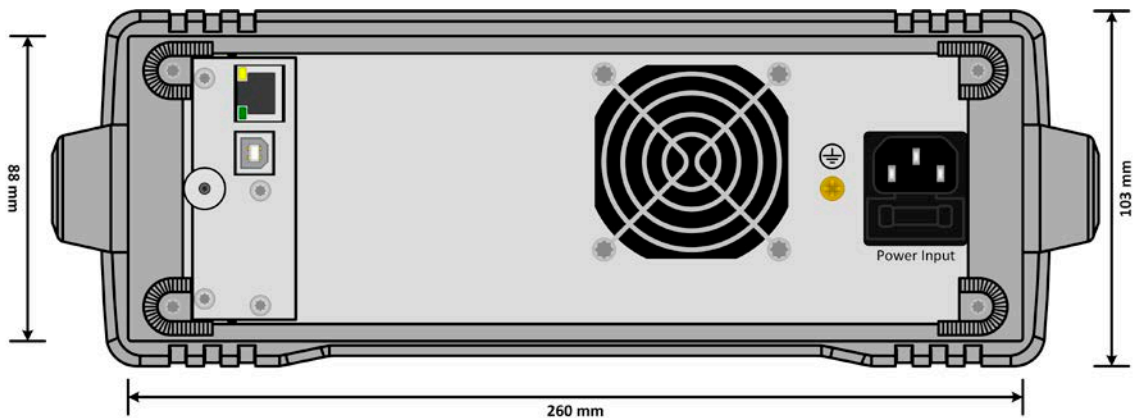


USB+Ethernet

接口与连接端子 / Interfaces and their connectors



用倾斜支架竖立时的前视图 / Front view with tilt stand in vertical position



装有USB + 以太网接口的产品后视图(可选) / Rear view with installed interface USB + Ethernet (optional)

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技术参数	Technical Data	Series EA-PS 3000 C / 系列
交流：供电	AC: Supply	
- 电压	- Voltage / Frequency	90...264 V, 45...66 Hz
- 功率因数	- Power factor correction (PFC)	>0.99
直流：电压	DC: Voltage	
- 精确度	- Accuracy	<额定值的0.1% / <0.1% of rated value
- 0-100%的负载调整率	- Load regulation 0-100%	<额定值的0.05% / <0.05% of rated value
- ±10% ΔU _{AC} 线性调整率	- Line regulation ±10% ΔU _{AC}	<额定值的0.02% / <0.02% of rated value
- 带载10-100%调整需时	- Regulation 10-100% load	<2ms
直流：电流	DC: Current	
- 精确度	- Accuracy	<额定值的0.2% / <0.2% of rated value
- 1-100% ΔI _{DC} 的负载调整率	- Load regulation 1-100% ΔI _{DC}	<额定值的0.15% / <0.15% of rated value
- ±10% ΔU _{AC} 的线性调整率	- Line regulation ±10% ΔU _{AC}	<额定值的0.05% / <0.05% of rated value
直流：功率	DC: Power	
- 精确度	- Accuracy	<额定值的1% / <1% of rated value
保护等级	Protection class	1
显示器 / 控制面板	Display / control panel	彩色显示器、旋钮与按钮 / Colour display, knobs and pushbuttons
数字接口 (可选)	Digital interfaces (optional)	
- 可供型号	- Available models	IF-KE5 USB (33100232): 1x USB Typ B IF-KE5 USB/LAN (33100233): 1x USB Typ B + 1x Ethernet (RJ45)
模拟接口 (可选)	Analog interface (optional)	5-针D-Sub母插, 电隔离 / 15-pole D-Sub, galvanically isolated
- 可供型号	- Available models	IF-KE5 USBANALOG: 1x Analog + 1x USB Typ B
- 信号范围	- Signal range	0...5 V 或 0...10 V (可转换) / 0...5 V or 0...10 V (switchable)
- 输入脚	- Inputs	U, I, P, 远程开-关, 直流输出开-关 / U, I, P, remote control on-off, DC output on-off
- 输出脚	- Outputs	U, I, 过压, 报警, 参考电压 / U, I, overvoltage, alarms, reference voltage
- U / I / P精确度	- Accuracy U / I / P	0...10 V: <0.2% 0...5 V: <0.4%
制冷	Cooling	温控风扇 / Temperature controlled fan
操作温度	Operation temperature	0...50 °C
储存温度	Storage temperature	-20...70 °C
湿度	Humidity	<80%, 无凝露 / non-condensing



型号	功率	电压	电流	纹波 ⁽¹⁾	重量	尺寸(宽 x 高 x 深) ⁽²⁾	订购编号
Model	Power	Voltage	Current	Ripple ⁽¹⁾	Weight	Dimensions (W x H x D) ⁽²⁾	Ordering number
EA-PS 3040-10 C	0...160 W	0...40 V	0...10 A	30 mV _{pp} / 3 mV _{RMS}	~ 4 kg	308 mm x 103 mm x 323 mm	35320208
EA-PS 3080-05 C	0...160 W	0...80 V	0...5 A	35 mV _{pp} / 4 mV _{RMS}	~ 4 kg	308 mm x 103 mm x 323 mm	35320209
EA-PS 3200-02 C	0...160 W	0...200 V	0...2 A	70 mV _{pp} / 13 mV _{RMS}	~ 4 kg	308 mm x 103 mm x 323 mm	35320210
EA-PS 3040-20 C	0...320 W	0...40 V	0...20 A	30 mV _{pp} / 3 mV _{RMS}	~ 4 kg	308 mm x 103 mm x 323 mm	35320211
EA-PS 3080-10 C	0...320 W	0...80 V	0...10 A	35 mV _{pp} / 4 mV _{RMS}	~ 4 kg	308 mm x 103 mm x 323 mm	35320212
EA-PS 3200-04 C	0...320 W	0...200 V	0...4 A	70 mV _{pp} / 13 mV _{RMS}	~ 4 kg	308 mm x 103 mm x 323 mm	35320213
EA-PS 3040-40 C	0...640 W	0...40 V	0...40 A	25 mV _{pp} / 4 mV _{RMS}	~ 5 kg	308 mm x 103 mm x 350 mm	35320214
EA-PS 3080-20 C	0...640 W	0...80 V	0...20 A	40 mV _{pp} / 6 mV _{RMS}	~ 5 kg	308 mm x 103 mm x 350 mm	35320215
EA-PS 3200-10 C	0...640 W	0...200 V	0...10 A	100 mV _{pp} / 25 mV _{RMS}	~ 5 kg	308 mm x 103 mm x 350 mm	35320216

(1) RMS-Wert: gemessen bei NF mit BWL 300 kHz, PP-Wert: gemessen bei HF mit BWL 20 MHz / RMS value: measured at LF with BWL 300 kHz, PP value: measured at HF with BWL 20 MHz

(2) Nur Gehäuse, nicht über alles (siehe Abbildungen) / Enclosure only, not over all (see depictions)