

EA-PSI 800 R 320 W - 5000 W



可编程壁挂式直流电源

Programmable DC wall mount power supplies



EA-PSI 865-10 R



Option: **IFXX**

- 宽范围输入电压90...264 V (1.5 kW以下型号)
- 两相输入电压340...460 V (5 kW型号)
- 效率高达 95.5%
- 输出功率: 320 W 至 0...5000 W
- 输出电压: 0...16 V 至 0...500 V
- 输出电流: 0...4 A 至 0...170 A
- 灵活的功率调整输出级**
- 有过压保护(OVP)
- 有过温保护(OT)
- 图形显示器显示所有值和功能
- 自动检测远程感测
- 0...10 V或0...5 V模拟接口
- 自然风冷*
- 温控风扇制冷**
- 其它选项

概要

EA-PSI 800 R系列是一款由微处理器控制的、底盘安装式实验室电源。它配备多种功能和特征, 让用户使用起来更方便、有效。

交流输入

1.5 kW以下型号采用主动式功率因数, 适合90 V至264 V AC的输入电压, 而5 kW型号则需在340 V...460 V AC两相输入电压下操作。

直流输出

本系列有多款型号, 可选择0...16 V和0...500 V输出电压, 0...4 A和0...170 A输出电流, 320 W和0...5 kW输出功率的型号。输出电压、电流、功率、OVP等都能通过菜单设定, 并显示于显示器上。

* 针对650 W以下型号

** 针对1 kW以上型号

- Wide range input 90...264 V (up to 1.5 kW models)
- Two-phase input 340...460 V (5 kW models)
- High efficiency up to 95.5%
- Output power ratings: 320 W up to 0...5000 W
- Output voltages: 0...16 V up to 0...500 V
- Output currents: 0...4 A up to 0...170 A
- Auto-ranging output stage **
- Overvoltage protection (OVP)
- Overtemperature protection (OT)
- Graphic display for all values and functions
- Remote sensing with automatic detection
- Analog interface for 0...10 V or 0...5 V
- Natural convection for cooling *
- Temperature controlled fans for cooling **
- Various options

General

The microprocessor controlled chassis mounting power-supplies from series EA-PSI 800 R have a multitude of functions and features making the use of this equipment easier and more effective.

AC supply

The equipment uses an active PFC. Models up to 1.5 kW are suitable for worldwide operation on mains supply of 90...264 V, the 5 kW models require a supply with 340...460 V AC.

DC output

Different units with output voltages from 0...16 V to 0...500 V, output currents from 0...4 A to 0...170 A and an output power ratings of 320 W up to 5 kW are available. Output voltage, current, power, OVP etc. can be set via a menu and are shown on the integrated LCD.

* Models up to 650 W ** Models from 1 kW

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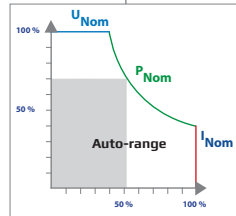
保护功能

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，输出会被关断，且显示器和模拟接口都发出一状态信号。

由于可调限流功能的存在，本产品也有短路和过载保护功能。

功率

1 kW以上型号输出功率可灵活变化，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。



远程感测

远程感测输入端可直接连到负载设备，以补偿连线上的压降。如果输入端已接上负载，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。

模拟接口

模拟接口输入引脚接上0 V...10 V或0 V...5 V电压，可设置0...100%的输出电压、电流。

模拟接口输出脚接上0 V...10 V或0 V...5 V电压，还可监控输出电压、电流和功率。此外，还有几个输入脚和输出脚，用来控制和监控产品状态。

并联

5 kW型号有一个“共享总线”端子，可轻易地将10台产品并联起来，从而获得均匀的电流分布。其它型号通过模拟接口相互连接，可形成一个并联的主-从系统。

选购件

- 通过RS232、CAN、USB或以太网隔离数字接口卡，用电脑可控制本产品。接口卡插槽位于产品后板，方便用户插上新接口或替换当前接口。本产品会自动检测接口卡，并只需少许的配置或不用配置。随接口卡附有免费Windows软件，配合RS232与USB接口卡，可用来控制和监控，记录数据和排序。可参考第154与158页。

Protective features

Intended to protect connected loads, it is possible to define an overvoltage protection threshold (OVP). If the output voltage exceeds the defined limit, the output is shut off. Also a status signal on the display and via the analog interface will be generated.

Due to the adjustable current limitation, the devices are also short-circuit- and overload-proof.

Power

Models with 1 kW or higher 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.

Remote sensing

The sensing input can be connected directly to the load to compensate voltage drops along the power cables. If the sensing input is connected to the load, the power supply will adjust the output voltage to ensure that the accurate required voltage is available on the load.

Analog interface

Analog inputs with voltage ranges from 0 V...10 V or 0 V...5 V to set output voltage and current from 0...100% are available. To monitor the output voltage and current, analog outputs are provided with voltage ranges of 0 V...10 V or 0 V...5 V. Several digital inputs and outputs can be used to control and monitor the status.

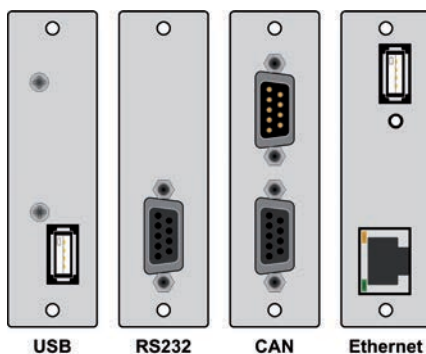
Parallel connection

The 5 kW models feature a „Share bus“ connector, which makes it easy to connect up to 10 units in parallel operation and in order to gain symmetric current distribution. Other models can be wired by their analog interfaces in order to have a parallel master-slave system.

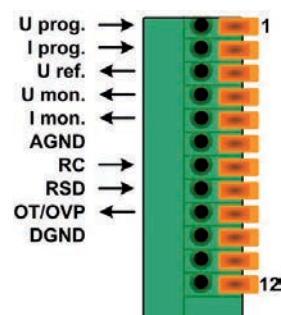
Options

- Isolated digital interface cards for RS232, CAN, USB or Ethernet to control the device by PC. The interface slot is located on the front 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 for the RS232 and USB interfaces which provides control and monitoring, data logging and semi-automatic sequences. See pages 154 and 158.

数字接口 / Digital interfaces



模拟接口 / Analog interface



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A

B

C

D

E

F

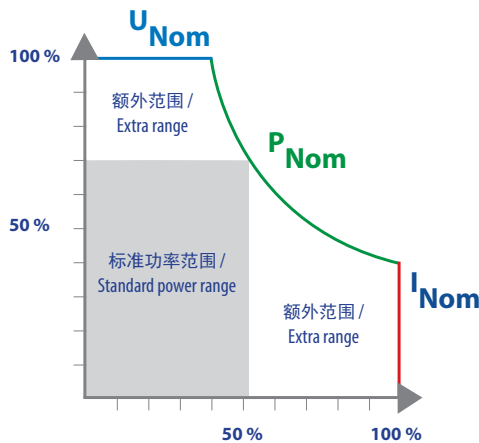
G

H

I

J

EA-PSI 800 R 1.5 kW



彩色显示器 / Graphics display



EA-PSI 800 R 5 kW



技术参数	Technical Data	EA-PSI 816-20 R	EA-PSI 832-10 R	EA-PSI 865-05 R	EA-PSI 832-20 R	EA-PSI 865-10 R
交流输入	Input AC	90...264 V, 1ph+N, 45...65 Hz, PF = >0.99				
直流输出电压	Output voltage DC	0...16 V	0...32 V	0...65 V	0...32 V	0...65 V
- 0-100%的负载调整率	- Load regulation 0-100%	<0.05%	<0.05%	<0.05%	<0.05%	<0.05%
- ±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 mV _{PP} <4 mV _{RMS}	<100 mV _{PP} <10 mV _{RMS}	<150 mV _{PP} <20 mV _{RMS}	<100 mV _{PP} <8 mV _{RMS}	<150 mV _{PP} <10 mV _{RMS}
- 10-100%的负载调整率	- Regulation 10-100% load	<2 ms	<2 ms	<2 ms	<2 ms	<2 ms
- 感测调整	- Sensing regulation	最大 /max. 2 V	最大 /max. 2 V	最大 /max. 2 V	最大 /max. 2 V	最大 /max. 2 V
- 10-90%上升斜率	- Slew rate 10-90%	最大 /max. 30 ms	最大 /max. 30 ms	最大 /max. 30 ms	最大 /max. 30 ms	最大 /max. 30 ms
输出电流	Output current	0...20 A	0...10 A	0...5 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}	<0.05%	<0.05%	<0.05%	<0.05%	<0.05%
- 纹波 ⁽¹⁾	- Ripple ⁽¹⁾	<60 mA _{PP} <10 mA _{RMS}	<35 mA _{PP} <7 mA _{RMS}	<12 mA _{PP} <3 mA _{RMS}	<65 mA _{PP} <10 mA _{RMS}	<25 mA _{PP} <3 mA _{RMS}
输出功率	Output power	320 W	320 W	325 W	640 W	650 W
效率	Efficiency	90.5%	89%	92%	90.5%	91%
过压类别	Overvoltage category	2				
保护等级	Protection class	1				
模拟编程	Analog programming	0...10 V 或 0...5 V, 可选 / 0...10 V or 0...5 V, selectable				
制冷方式	Cooling	自然对流, 上&下盖都有通风槽 / Convectonal, ventilation slots at top & bottom				
工作温度	Operation temperature	0...50 °C				
尺寸(宽 x 高 x 深)	Dimensions (WxHxD)	218x163x83 mm	218x163x83 mm	218x163x83 mm	218x163x83 mm	218x163x83 mm
安装尺寸(宽 x 高 x 深)	Installation dim. (WxHxD)	218x190x85 mm	218x190x85 mm	218x190x85 mm	218x190x85 mm	218x190x85 mm
重量	Weight	2.2 kg	2.2 kg	2.2 kg	2.2 kg	2.2 kg
订购编号	Ordering number	21540401	21540402	21540403	21540404	21540405

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

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技术参数	Technical Data	EA-PSI 8160-04 R	EA-PSI 880-40 R	EA-PSI 8360-10 R	EA-PSI 880-60 R	EA-PSI 8360-15 R
交流输入	Input AC	90...264 V, 1ph+N, 45...65 Hz, PF = >0.99				
直流输出电压	Output voltage DC	0...160 V	0...80 V	0...360 V	0...80 V	0...360 V
- 0-100%的负载调整率	- Load regulation 0-100%	<0.05%	<0.05%	<0.05%	<0.05%	<0.05%
- ±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⁾	<120 mV _{PP} <20 mV _{RMS}	<10 mV _{PP} <5 mV _{RMS}	<30 mV _{PP} <12 mV _{RMS}	<10 mV _{PP} <5 mV _{RMS}	<30 mV _{PP} <12 mV _{RMS}
- 10-100%的负载调整率	- Regulation 10-100% load	<2 ms	<2 ms	<2 ms	<2 ms	<2 ms
- 感测调整	- Sensing regulation	最大 / max. 2 V	最大 / max. 2 V	最大 / max. 8 V	最大 / max. 2 V	最大 / max. 8 V
- 10-90%上升斜率	- Slew rate 10-90%	最大 / max. 30 ms	最大 / max. 30 ms	最大 / max. 30 ms	最大 / max. 30 ms	最大 / max. 30 ms
输出电流	Output current	0...4 A	0...40 A	0...10 A	0...60 A	0...15 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}	<0.05%	<0.05%	<0.05%	<0.05%	<0.05%
- 纹波 ⁽¹⁾	- Ripple ⁽¹⁾	<3 mA _{PP} <1 mA _{RMS}	<19 mA _{PP} <7 mA _{RMS}	<1.2 mA _{PP} <0.45 mA _{RMS}	<19 mA _{PP} <7 mA _{RMS}	<1.2 mA _{PP} <0.45 mA _{RMS}
输出功率	Output power	640 W	1000 W	1000 W	1500 W	1500 W
效率	Efficiency	92%	93%	93%	93%	93%
过压类别	Overvoltage category	2				
保护等级	Protection class	1				
模拟编程	Analog programming	0...10 V 或 0...5 V, 可选 / 0...10 V or 0...5 V, selectable				
制冷方式	Cooling	自然对流 / Convection 风扇, 上&下盖都有通风槽 / Fan, vents at top & bottom				
工作温度	Operation temperature	0...50 °C				
尺寸(宽 x 高 x 深)	Dimensions (WxHxD)	218x163x83 mm	90x360x240 mm	90x360x240 mm	90x360x240 mm	90x360x240 mm
安装尺寸(宽 x 高 x 深)	Installation dim. (WxHxD)	218x190x85 mm	90x370x295 mm	90x370x295 mm	90x370x295 mm	90x370x295 mm
重量	Weight	2.2 kg	6.4 kg	6.4 kg	6.6 kg	6.6 kg
订购编号	Ordering number	21540406	21540407	21540409	21540408	21540410

技术参数	Technical Data	EA-PSI 880-170 R	EA-PSI 8200-70 R	EA-PSI 8500-30 R
交流输入	Input AC	340...460 V, 2ph, 50/60 Hz, PF = >0.99		
直流输出电压	Output voltage DC	0...80 V	0...200 V	0...500 V
- 0-100%的负载调整率	- Load regulation 0-100%	<0.05%	<0.05%	<0.05%
- ±10% ΔU _{AC} 的线性调整率	- Line regulation ±10% ΔU _{AC}	<0.02%	<0.02%	<0.02%
- 纹波 ⁽¹⁾	- Ripple ⁽¹⁾	<150 mV _{PP} / <10 mV _{RMS}	<200 mV _{PP} / <25 mV _{RMS}	<250 mV _{PP} / <70 mV _{RMS}
- 10-100%的负载调整率	- Regulation 10-100% load	<1 ms	<2 ms	<2 ms
- 感测调整	- Sensing regulation	最大 / max. 2.5 V	最大 / max. 6 V	最大 / max. 10 V
- 10-90%上升斜率	- Slew rate 10-90%	17 ms	17 ms	17 ms
输出电流	Output current	0...170 A	0...70 A	0...30 A
- 0-100% ΔU _{DC} 的负载调整率	- Load regulation 0-100% ΔU _{DC}	<0.15%	<0.15%	<0.15%
- ±10% ΔU _{AC} 的线性调整率	- Line regulation ±10% ΔU _{AC}	<0.05%	<0.05%	<0.05%
- 纹波 ⁽¹⁾	- Ripple ⁽¹⁾	<300 mA _{PP} / <40 mA _{RMS}	<44 mA _{PP} / <11 mA _{RMS}	<14 mA _{PP} / <8 mA _{RMS}
输出功率	Output power	5000 W	5000 W	5000 W
效率	Efficiency	93%	95.2%	95.5%
过压类别	Overvoltage category	2		
保护等级	Protection class	1		
模拟编程	Analog programming	0...10 V 或 0...5 V, 可选 / 0...10 V or 0...5 V, selectable		
制冷方式	Cooling	风扇, 上&下盖都有通风槽 / Fan, vents at top & bottom		
工作温度	Operation temperature	0...50 °C		
尺寸(宽 x 高 x 深)	Dimensions (WxHxD)	180x530x171 mm	180x530x171 mm	180x530x171 mm
安装尺寸(宽 x 高 x 深)	Installation dim. (WxHxD)	180x595x175 mm	180x595x175 mm	180x595x175 mm
重量	Weight	12 kg	12 kg	12 kg
订购编号	Ordering number	21540411	21540413	21540412

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

