

EA-EL 3000 / EA-EL 9000 / EA-EL 9000 HP 400W - 7200W

直流电子负载 / ELECTRONIC DC LOADS

U
I
P
R
OT

USB

RS232

LAN

IEEE

CAN



EA-EL 3160-60

- 功率级别: 0...400W至0...7200W
- 按客户需求可提供更大功率的机柜式组合
- 输入电压: 0...80V, 0...160V, 0...400V, 0...750V
- 输入电流: 0...25A至0...600A
- 阻值: 0...1.2Ω至0...800Ω
- 过温保护(OT)
- 带可调占空比的脉动操作
- 可调上升/下降时间
- 操作模式
 - 恒流 (CC)
 - 恒压 (CV)
 - 恒功率 (CP)
 - 恒阻 (CR)
- 远程感测, 触发输入, 触发输出*
- 电池测试模式, 带时间和容量计算器
- 选购件, 数字接口
 - RS232, CAN, USB, GPIB (IEEE)
 - Ethernet/LAN
- 可选水冷式 (EL 9000系列)

- **Power ratings: 0...400W up to 0...7200W**
- **Cabinets with higher power upon request**
- **Input voltages: 0...80V, 0...160V, 0...400V, 0...750V**
- **Input currents: 0...25A up to 0...600A**
- **Resistances: 0...1.2Ω up to 0...800Ω**
- **Overtemperature protection (OT)**
- **Pulse operation with adjustable duty cycle**
- **Rise/fall time adjustable**
- **Operation modes**
 - **Constant current (CC)**
 - **Constant voltage (CV)**
 - **Constant power (CP)**
 - **Constant resistance (CR)**
- **Remote sense, trigger input, trigger output***
- **Battery test mode with time and capacity counter**
- **Optional, digital interface cards**
 - **RS232, CAN, USB, GPIB (IEEE)**
 - **Ethernet/LAN**
- **Optional water cooling (EL 9000 series)**

概述

EA-EL 3000 和 EA-EL 9000系列是一款由最先进微处理器控制的电子负载, 它能满足, 特别是现代实验室和工业的各种需求。

操作模式

本负载提供下列几种操作模式: 恒压 (CV), 恒流 (CC), 恒功率(CP)和恒阻(CR)。

用一开关可选择上述操作模式。选择恰当的参数来保护测试设备。举例: 恒流模式有一个最大功率设定, 而恒压或恒阻则有一最大电流和功率设定。

静态操作

在静态操作模式下, 可通过精调旋钮设定A, B两组数据。用户可用旋转开关在这两组数间转换使用。

General

The state-of-the-art microprocessor controlled electronic loads of the EA-EL 3000 and EA-EL 9000 series satisfy practically every need of modern laboratories and industry.

Operation modes

The loads provide the following operation modes: Constant Voltage (CV), Constant Current (CC), Constant Power (CP) and Constant Resistance (CR).

The modes are selected by a switch. Appropriate parameters become available to protect the test equipment. For example, constant current can have a maximum power setting and constant voltage or resistance can have a maximum current and power setting.

Static operation

In static operation, two values A and B can be set using a fine adjustment rotary knob. The user can toggle between these two values by a rotary switch.

* 仅针对EL 3000型号

* EL 3000 models only

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动态操作

在动态操作模式下，单片机根据编程时间和间隔时间在A和B间转换。可为每个数值设置50 μ s至100s的脉冲间隔时间，此外，可设置30 μ s至200ms向上和向下的跃变时间。模拟接口上还有一外部触发输入脚，用来给外部电源供电，从而转换A和B数值。

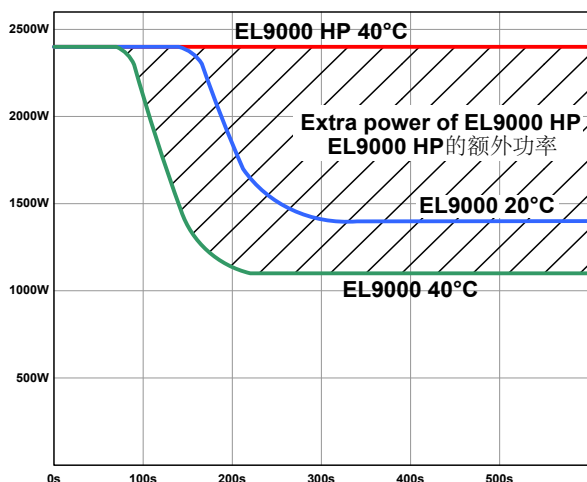
电池测试模式

在电池测试模式下，电池以恒流，恒功率或恒阻放电，直到达到预设终止放电电压。于是测量并显示放电时间和消耗容量。

功率范围

标准功率范围为400W至7200W，按需可做更高功率产品。此外，还可参数化测试设备的需求。EL 9000和EL 9000HP系列产品具有热降额功能，以限制功率，避免在最大功率范围下操作时过载。环境温度越低，终端阶段的冷却状况越好，负载可送出的功率越大。为避免该状况发生，我们还提供水冷式型号，即使在极致条件下，产品也能输出恒定功率。

EL 9000 / EL 9000 HP 功率特性



Dynamic Operation

In dynamic operation, the microcontroller switches between two values A and B, according to the adjusted pulse width and duty cycle. For each value, a pulse interval between 50 μ s and 100s can be set. In addition, ramp up/down time between 30 μ s and 200ms can be adjusted. There is also an external trigger input on the analogue interface to be fed from an external source and to toggle between A and B.

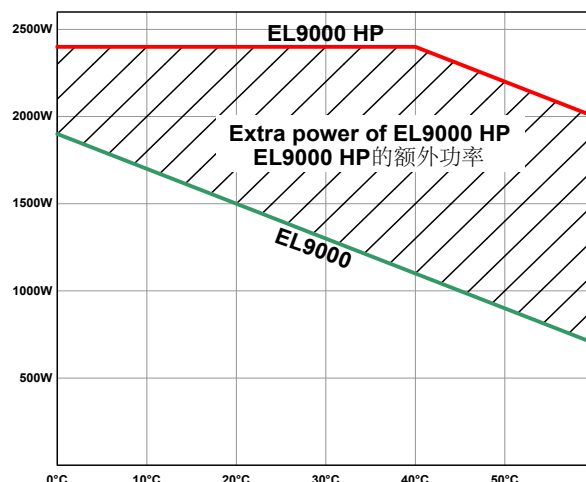
Battery test mode

In the battery test mode the battery is discharged under constant current, constant power or constant resistance until it reaches a predetermined final discharge voltage. The discharge time and consumed capacity are measured and displayed.

Power range

The standard range provides loads from 400W to 7200W, or, upon request, cabinets with higher power. Units of the EL 9000 and EL 9000HP series are equipped with thermal derating in order to limit power and avoid overheating when operating in the maximum power range. The lower the ambient temperature and the better the cooling, the higher the power that the load can take. To circumvent this situation, models with water cooling can be delivered for permanent performance at maximum value and in extreme conditions.

Power characteristics EL 9000 / EL 9000 HP



EA-EL 3000 / EA-EL 9000 / EA-EL 9000 HP 400W - 7200W 直流电子负载 / ELECTRONIC DC LOADS

显示

所有重要信息都直接显示于屏幕上。
因此关于U, I, P, R的实际输出值或预设值, 实际控制状态(CV,CC,CP,CR), 错误信息, 设置菜单的设定从屏幕上清新可见。同样, 可选数字接口的信息也显示出来。

模拟接口卡

此卡有电压、电流、功率和阻值设定值输入端, 电压和电流监控用输出端, 控制输入端, 信号输出端和触发输入端。

触发输出端 (仅针对EL 3000)

在动态操作模式下, A和B数值转换用的内部触发信号可用于控制或校准其它设备。

System Bus

EA EL9000 和 EL 9000 HP系列后板的„System Bus“端子有多种功能, 比如: 远程感测输入, 为PS9000, PSI 9000, PSI 8000 2U或PS 8000 2U系列电源创建两象限模式的共享总线, 以及内置速度调整转换点。一个输入端用于调节两象限操作的一个环路。

可选项

- 经RS232, CAN, USB和GPIB (IEEE), Ethernet/LAN绝缘数字接口卡, 可用个人电脑控制。随接口卡附有免费Windows软件, 可用于控制和监控、数据记录和序列。关于接口卡的信息也可参考63和64页。
- 还提供水冷式类型产品 (仅针对EL 9000系列)

Display

All important information is directly represented on a display. Thus, information about the actual output values or set values for U, I, P, R, the actual regulation mode (CV,CC,CP,CR), error messages and settings in the setup menu are clearly available. Similarly, settings of the optionally available digital interfaces will be shown.

Analogue interface

Inputs for voltage, current, power and resistance set values, outputs for voltage and current monitoring, control inputs, signal outputs and a trigger input are available.

Trigger output (EL 3000 series only)

In dynamic operation, the internal trigger signal, which is generated for switching between A and B values, is led to a clamp terminal and can be used to control external applications.

System Bus

The „System Bus“ at the rear of the EL 9000 and EL 9000 HP series has a number of functions, such as the remote sense input, the Share bus input to build a two quadrant operation system with laboratory power supplies of the PS 9000, PSI 9000, PSI 8000 2U or PS 8000 2U series, and switching of the internal regulation speed. One input is used to adjust a cross current for two-quadrants operation.

Options

- Isolated, digital interface cards for RS232, CAN, USB, GPIB (IEEE), Ethernet/LAN to control the device by PC. Included with the interface cards is a free Windows software which provides control and monitoring, data logging and sequences. Also see pages 63 and 64.
- Water cooling (EL 9000 series only)

EL 9000 2400W 后视图 / Rear view EL 9000 2400W



EL 9000 4800W 后视图 / Rear view EL 9000 4800W



EA-EL 3000 / EA-EL 9000 / EA-EL 9000 HP 400W - 7200W

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一般规格

General specifications

技术参数	Technical Data	EA-EL 3000	EA-EL 9000 / EA-EL 9000 HP
电源输入电压	Power input voltage	115V/230V @ 50/60Hz	115V/230V @ 50/60Hz
显示器	Display	显示2x40个字符 / Display 2x40 Characters	显示2x40个字符 / Display 2x40 Characters
电池测试	Batterie testing		
- 关断电压	- Cut off voltage	自由调节 / Free adjustable	自由调节 / Free adjustable
- 显示器显示数值	- Read out at display	放电时间 / Duration of discharge	放电时间 / Duration of discharge
		放电容量 / Capacity of discharge	放电容量 / Capacity of discharge
模拟接口	Analogue interface		
- U / I / P / R 设定输入脚	- Setting inputs U / I / P / R	0...10V	0...10V
- U / I 监控输出脚	- Monitoring outputs U / I	0...10V	0...10V
- 控制信号	- Control signals	Intern / Extern, 内/外, 输入开/关 / Input on/off	Intern / Extern, 内/外, 输入开/关 / Input on/off
		R-模式 / R mode	R-模式 / R mode
- 状态信号	- Status signals	过压 / Overvoltage	过压 / Overvoltage
		过温 / Overtemperature	过温 / Overtemperature
- 参考电压	- Reference voltage	10V	10V
制冷方式	Cooling	温控风扇 / Temperature controlled fan	温控风扇 / Temperature controlled fan
连接端子	Terminals	前板 / Front panel	后板 / Rear panel
- 负载输入	- Load input	安全插座 / Safety sockets	M8 螺丝端子 / Screw terminal M8
- 系统总线	- System Bus	--	7 Pin 螺丝端子 / Screw terminal 7 Pin
- 模拟接口	- Analogue interface	Sub-D 连接器 / Sub-D connector 15 Pin	Sub-D 连接器 / Sub-D connector 15 Pin
- 感测/触发输出	- Sense/Trigger out	4极螺丝端子 / 4 pole screw terminal	-
模拟接口	Analogue interface		
- 编程电压	- Programming voltage	0...10V	0...10V
- 监控电压	- Monitoring voltage	0...10V	0...10V
- 输入脚	- Inputs	U, I, P, R, Standby-待机, Remote/远程, Trigger-触发	U, I, P, R, Standby-待机, Remote-远程
- 输出脚	- Outputs	U, I, OT/OVP, Reference参考	U, I, OT/OVP, Reference参考

EL 3000系列

EA-EL 3000系列电子负载安装于小巧的桌面式外壳内, 配备多种电子负载必备功能。

Series EL 3000

The electronic loads in the EA-EL 3000 series are in compact table-top housings and offer all the features that can be expected of an electronic load.

技术参数	Technical Data	EA-EL 3160-60	EA-EL 3400-25
最大输入功率	Power input maximum	400W	400W
20°C时恒定输入功率	Steady power input at 20°C	400W	400W
电压	Voltage		
- 调节范围	- Adjustment range	0...160V DC	0...400V DC
- 分辨率	- Resolution	100mV	100mV
- 精确度	- Accuracy	≤0.1%	≤0.1%
- 最大电流时的最小电压	- Min. voltage at max. current	约 / approx. 1.4V	约 / approx. 1.0V
电流	Current		
- 调节范围	- Adjustment range	0...60A	0...60A
- 分辨率	- Resolution	10mA	10mA
- 精确度	- Accuracy	≤0.2%	≤0.2%
功率	Power		
- 调节范围	- Adjustment range	0...400W	0...400W
- 分辨率	- Resolution	100mW	100mW
- 精确度	- Accuracy	≤2%	≤2%
内阻	Resistance		
- 调节范围 1	- Adjustment range 1	0...10Ω	0...40Ω
- 分辨率	- Resolution	10mΩ	10mΩ
- 调节范围 2	- Adjustment range 2	0...400Ω	0...800Ω
- 分辨率	- Resolution	100mΩ	1Ω
- 精确度	- Accuracy	≤2%	≤2%
动态函数	Dynamic function	2个级别 / 2 levels	2个级别 / 2 levels
- A / B 占空比级别	- Duty cycle level A / B	50μs...100s	50μs...100s
- 各级别升降时间	- Level rise and fall time	30μs...200ms	30μs...200ms
尺寸 (WxHxD)	Dimensions (WxHxD)	240 x 120 x 300mm	240 x 120 x 300mm
重量	Weight	6.0 kg	6.0 kg
产品编号	Article No.	35320200	35320201

EA-EL 3000 / EA-EL 9000 / EA-EL 9000 HP 400W - 7200W

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EL 9000系列

EA-EL 9000 系列电子负载经上千次验证，配备多种电子负载必备功能。

Series EL 9000

The electronic loads in the EA-EL9000 series have proved themselves thousandfold and offer all the features that can be expected of an electronic load.

技术参数	Technical Data	EA-EL 9080-200	EA-EL 9080-400	EA-EL 9080-600
最大输入功率	Power input maximum	2400W	4800W	7200W
25°C时恒定输入功率	Steady power input at 25°C	1400W	2800W	4200W
电压	Voltage			
- 调节范围	- Adjustment range	0...80V DC	0...80V DC	0...80V DC
- 分辨率	- Resolution	100mV	100mV	100mV
- 精确度	- Accuracy	≤0.1%	≤0.1%	≤0.1%
- 最大电流时的最小电压	- Min. voltage at max. current	约 / approx. 1.0V	约 / approx. 1.0V	约 / approx. 1.0V
电流	Current			
- 调节范围	- Adjustment range	0...200A	0...400A	0...600A
- 分辨率	- Resolution	100mA	100mA	100mA
- 精确度	- Accuracy	≤0.2%	≤0.2%	≤0.2%
功率	Power			
- 调节范围	- Adjustment range	0...2400W	0...4800W	0...7200W
- 分辨率	- Resolution	1W	1W	1W
- 精确度	- Accuracy	≤2%	≤2%	≤2%
内阻	Resistance			
- 调节范围 1	- Adjustment range 1	0...5Ω	0...2.5Ω	0...1.2Ω
- 分辨率	- Resolution	10mΩ	1mΩ	1mΩ
- 调节范围 2	- Adjustment range 2	0...100Ω	0...50Ω	0...25Ω
- 分辨率	- Resolution	100mΩ	100mΩ	10mΩ
- 精确度	- Accuracy	≤2%	≤2%	≤2%
动态函数	Dynamic function	2个级别 / 2 levels	2个级别 / 2 levels	2个级别 / 2 levels
- A / B 占空比级别	- Duty cycle level A / B	50μs...100s	50μs...100s	50μs...100s
- 各级别升降时间	- Level rise and fall time	30μs...200ms	30μs...200ms	30μs...200ms
尺寸 (W H D)	Dimensions (W H D)	19" 2U 460mm	19" 4U 460mm	19" 6U 460mm
重量	Weight	16kg	26 kg	36 kg
产品编号	Article No.	33200230	33200231	33200232

技术参数	Technical Data	EA-EL 9160-100	EA-EL 9160-200	EA-EL 9160-300
最大输入功率	Power input maximum	2400W	4800W	7200W
25°C时恒定输入功率	Steady power input at 25°C	1400W	2800W	4200W
电压	Voltage			
- 调节范围	- Adjustment range	0...160V DC	0...160V DC	0...160V DC
- 分辨率	- Resolution	100mV	100mV	100mV
- 精确度	- Accuracy	≤0.1%	≤0.1%	≤0.1%
- 最大电流时的最小电压	- Min. voltage at max. current	约 / approx. 0.7V	约 / approx. 0.7V	约 / approx. 0.7V
电流	Current			
- 调节范围	- Adjustment range	0...100A	0...200A	0...300A
- 分辨率	- Resolution	100mA	100mA	100mA
- 精确度	- Accuracy	≤0.2%	≤0.2%	≤0.2%
功率	Power			
- 调节范围	- Adjustment range	0...2400W	0...4800W	0...7200W
- 分辨率	- Resolution	1W	1W	1W
- 精确度	- Accuracy	≤2%	≤2%	≤2%
内阻	Resistance			
- 调节范围 1	- Adjustment range 1	0...10Ω	0...5Ω	0...2.5Ω
- 分辨率	- Resolution	10mΩ	10mΩ	1mΩ
- 调节范围 2	- Adjustment range 2	0...200Ω	0...100Ω	0...50Ω
- 分辨率	- Resolution	100mΩ	100mΩ	100mΩ
- 精确度	- Accuracy	≤2%	≤2%	≤2%
动态函数	Dynamic function	2个级别 / 2 levels	2个级别 / 2 levels	2个级别 / 2 levels
- A / B 占空比级别	- Duty cycle level A / B	50μs...100s	50μs...100s	50μs...100s
- 各级别升降时间	- Level rise and fall time	30μs...200ms	30μs...200ms	30μs...200ms
尺寸 (W H D)	Dimensions (W H D)	19" 2U 460mm	19" 4U 460mm	19" 6U 460mm
重量	Weight	16kg	26kg	36kg
产品编号	Article No.	33200233	33200234	33200235

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技术参数	Technical Data	EA-EL 9400-50	EA-EL 9400-100	EA-EL 9400-150
最大输入功率	Power input maximum	2400W	4800W	7200W
25°C时恒定输入功率	Steady power input at 25°C	1400W	2800W	4200W
电压	Voltage			
- 调节范围	- Adjustment range	0...400V DC	0...400V DC	0...400V DC
- 分辨率	- Resolution	100mV	100mV	100mV
- 精确度	- Accuracy	≤0.1%	≤0.1%	≤0.1%
- 最大电流时的最小电压	- Min. voltage at max. current	约 / approx. 0.5V	约 / approx. 0.5V	约 / approx. 0.5V
电流	Current			
- 调节范围	- Adjustment range	0...50A	0...100A	0...150A
- 分辨率	- Resolution	10mA	100mA	100mA
- 精确度	- Accuracy	≤0.2%	≤0.2%	≤0.2%
功率	Power			
- 调节范围	- Adjustment range	0...2400W	0...4800W	0...7200W
- 分辨率	- Resolution	1W	1W	1W
- 精确度	- Accuracy	≤2%	≤2%	≤2%
内阻	Resistance			
- 调节范围 1	- Adjustment range 1	0...10Ω	0...5Ω	0...5Ω
- 分辨率	- Resolution	10mΩ	10mΩ	10mΩ
- 调节范围 2	- Adjustment range 2	0...400Ω	0...200Ω	0...100Ω
- 分辨率	- Resolution	100mΩ	100mΩ	100mΩ
- 精确度	- Accuracy	≤2%	≤2%	≤2%
动态函数	Dynamic function	2个级别 / 2 levels	2个级别 / 2 levels	2个级别 / 2 levels
- A / B 占空比级别	- Duty cycle level A / B	50μs...100s	50μs...100s	50μs...100s
- 各级别升降时间	- Level rise and fall time	30μs...200ms	30μs...200ms	30μs...200ms
尺寸 (W H D)	Dimensions (W H D)	19" 2U 460mm	19" 4U 460mm	19" 6U 460mm
重量	Weight	16kg	26kg	36kg
产品编号	Article No.	33200236	33200237	33200238

技术参数	Technical Data	EA-EL 9750-25	EA-EL 9750-50	EA-EL 9750-75
最大输入功率	Power input maximum	2400W	4800W	7200W
20°C时恒定输入功率	Steady power input at 20°C	1400W	2800W	4200W
电压	Voltage			
- 调节范围	- Adjustment range	0...750V DC	0...750V DC	0...750V DC
- 分辨率	- Resolution	100mV	100mV	100mV
- 精确度	- Accuracy	≤0.1%	≤0.1%	≤0.1%
- 最大电流时的最小电压	- Min. voltage at max. current	约 / approx. 0.5V	约 / approx. 0.5V	约 / approx. 0.5V
电流	Current			
- 调节范围	- Adjustment range	0...25A	0...50A	0...75A
- 分辨率	- Resolution	10mA	10mA	10mA
- 精确度	- Accuracy	≤0.2%	≤0.2%	≤0.2%
功率	Power			
- 调节范围	- Adjustment range	0...2400W	0...4800W	0...7200W
- 分辨率	- Resolution	1W	1W	1W
- 精确度	- Accuracy	≤2%	≤2%	≤2%
内阻	Resistance			
- 调节范围 1	- Adjustment range 1	0...40Ω	0...20Ω	0...15Ω
- 分辨率	- Resolution	10mΩ	10mΩ	10mΩ
- 调节范围 2	- Adjustment range 2	0...800Ω	0...400Ω	0...300Ω
- 分辨率	- Resolution	100mΩ	100mΩ	100mΩ
- 精确度	- Accuracy	≤2%	≤2%	≤2%
动态函数	Dynamic function	2个级别 / 2 levels	2个级别 / 2 levels	2个级别 / 2 levels
- A / B 占空比级别	- Duty cycle level A / B	50μs...100s	50μs...100s	50μs...100s
- 各级别升降时间	- Level rise and fall time	30μs...200ms	30μs...200ms	30μs...200ms
尺寸 (W H D)	Dimensions (W H D)	19" 2U 460mm	19" 4U 460mm	19" 6U 460mm
重量	Weight	16kg	26kg	36kg
产品编号	Article number	33200252	33200253	33200254

EA-EL 3000 / EA-EL 9000 / EA-EL 9000 HP 400W - 7200W

直流电子负载 / ELECTRONIC DC LOADS

EA-EL 9000 HP

EA-EL 9000 HP 电子负载系列是EA-EL 9000 系列的升级型号，它增加了一个高性能冷却器和风扇。

在40°C环境温度下，输入功率最大时，负载热降额功能启动。在此温度下，EA-EL 9000 HP 系列的性能大约比EA-EL 9000 系列的要高60%。

水冷式产品也可达到上述特征，可额外提供（选配）。

Series EL 9000 HP

The electronic loads in the EA-EL 9000 HP series offer an upgrade of the EA-EL 9000 series by incorporating a high performance cooling block and bigger fans.

At maximum input power thermal derating of the load commences at an ambient temperature of 40°C. At such a temperature the performance of the EA-EL 9000 HP series is approx. 60% higher than that of the EA-EL 9000 series.

A similar advantage may also be gained with water cooling, which is available as an optional extra.

技术参数	Technical Data	EA-EL 9080-200 HP	EA-EL 9080-400 HP	EA-EL 9080-600 HP
最大输入功率	Power input maximum	2400W	4800W	7200W
40°C时恒定输入功率	Steady power input at 40°C	2400W	4800W	7200W
电压	Voltage			
- 调节范围	- Adjustment range	0...80V DC	0...80V DC	0...80V DC
- 分辨率	- Resolution	100mV	100mV	100mV
- 精确度	- Accuracy	≤0.1%	≤0.1%	≤0.1%
- 最大电流时的最小电压	- Min. voltage at max. current	约 / approx. 1.0V	约 / approx. 1.0V	约 / approx. 1.0V
电流	Current			
- 调节范围	- Adjustment range	0...200A	0...400A	0...600A
- 分辨率	- Resolution	100mA	100mA	100mA
- 精确度	- Accuracy	≤0.2%	≤0.2%	≤0.2%
功率	Power			
- 调节范围	- Adjustment range	0...2400W	0...4800W	0...7200W
- 分辨率	- Resolution	1W	1W	1W
- 精确度	- Accuracy	≤2%	≤2%	≤2%
内阻	Resistance			
- 调节范围 1	- Adjustment range 1	0...5Ω	0...2.5Ω	0...1.2Ω
- 分辨率	- Resolution	10mΩ	1mΩ	1mΩ
- 调节范围 2	- Adjustment range 2	0...100Ω	0...50Ω	0...25Ω
- 分辨率	- Resolution	100mΩ	100mΩ	10mΩ
- 精确度	- Accuracy	≤2%	≤2%	≤2%
动态函数	Dynamic function	2个级别 / 2 levels	2个级别 / 2 levels	2个级别 / 2 levels
- A / B 占空比级别	- Duty cycle level A / B	50μs...100s	50μs...100s	50μs...100s
- 各级别升降时间	- Level rise and fall time	30μs...200ms	30μs...200ms	30μs...200ms
尺寸 (W H D)	Dimensions (W H D)	19" 3U 460mm	19" 6U 460mm	19" 9U 460mm
重量	Weight	19kg	29 kg	39 kg
产品编号	Article No.	33200240	33200241	33200246



EA-EL 9000 HP 7200W

EA-EL 3000 / EA-EL 9000 / EA-EL 9000 HP 400W - 7200W

直流电子负载 / ELECTRONIC DC LOADS

技术参数	Technical Data	EA-EL 9160-100 HP	EA-EL 9160-200 HP	EA-EL 9160-300 HP
最大输入功率	Power input maximum	2400W	4800W	7200W
40°C时恒定输入功率	Steady power input at 40°C	2400W	4800W	7200W
电压	Voltage			
- 调节范围	- Adjustment range	0...160V DC	0...160V DC	0...160V DC
- 分辨率	- Resolution	100mV	100mV	100mV
- 精确度	- Accuracy	≤0.1%	≤0.1%	≤0.1%
- 最大电流时的最小电压	- Min. voltage at max. current	约 / approx. 0.7V	约 / approx. 0.7V	约 / approx. 0.7V
电流	Current			
- 调节范围	- Adjustment range	0...100A	0...200A	0...300A
- 分辨率	- Resolution	100mA	100mA	100mA
- 精确度	- Accuracy	≤0.2%	≤0.2%	≤0.2%
功率	Power			
- 调节范围	- Adjustment range	0...2400W	0...4800W	0...7200W
- 分辨率	- Resolution	1W	1W	1W
- 精确度	- Accuracy	≤2%	≤2%	≤2%
内阻	Resistance			
- 调节范围 1	- Adjustment range 1	0...10Ω	0...5Ω	0...2.5Ω
- 分辨率	- Resolution	10mΩ	10mΩ	1mΩ
- 调节范围 2	- Adjustment range 2	0...200Ω	0...100Ω	0...50Ω
- 分辨率	- Resolution	100mΩ	100mΩ	100mΩ
- 精确度	- Accuracy	≤2%	≤2%	≤2%
动态函数	Dynamic function	2个级别 / 2 levels	2个级别 / 2 levels	2个级别 / 2 levels
- A / B占空比级别	- Duty cycle level A / B	50μs...100s	50μs...100s	50μs...100s
- 各级别升降时间	- Level rise and fall time	30μs...200ms	30μs...200ms	30μs...200ms
尺寸 (W H D)	Dimensions (W H D)	19" 3U 460mm	19" 6U 460mm	19" 9U 460mm
重量	Weight	19kg	29kg	39kg
产品编号	Article No.	33200242	33200243	33200247

技术参数	Technical Data	EA-EL 9400-50 HP	EA-EL 9400-100 HP	EA-EL 9400-150 HP
最大输入功率	Power input maximum	2400W	4800W	7200W
40°C时恒定输入功率	Steady power input at 40°C	2400W	4800W	7200W
电压	Voltage			
- 调节范围	- Adjustment range	0...400V DC	0...400V DC	0...400V DC
- 分辨率	- Resolution	100mV	100mV	100mV
- 精确度	- Accuracy	≤0.1%	≤0.1%	≤0.1%
- 最大电流时的最小电压	- Min. voltage at max. current	约 / approx. 0.5V	约 / approx. 0.5V	约 / approx. 0.5V
电流	Current			
- 调节范围	- Adjustment range	0...50A	0...100A	0...150A
- 分辨率	- Resolution	100mA	100mA	100mA
- 精确度	- Accuracy	≤0.2%	≤0.2%	≤0.2%
功率	Power			
- 调节范围	- Adjustment range	0...2400W	0...4800W	0...7200W
- 分辨率	- Resolution	1W	1W	1W
- 精确度	- Accuracy	≤2%	≤2%	≤2%
内阻	Resistance			
- 调节范围 1	- Adjustment range 1	0...10Ω	0...5Ω	0...5Ω
- 分辨率	- Resolution	10mΩ	10mΩ	10mΩ
- 调节范围 2	- Adjustment range 2	0...400Ω	0...200Ω	0...100Ω
- 分辨率	- Resolution	100mΩ	100mΩ	100mΩ
- 精确度	- Accuracy	≤2%	≤2%	≤2%
动态函数	Dynamic function	2个级别 / 2 levels	2个级别 / 2 levels	2个级别 / 2 levels
- A / B占空比级别	- Duty cycle level A / B	50μs...100s	50μs...100s	50μs...100s
- 各级别升降时间	- Level rise and fall time	30μs...200ms	30μs...200ms	30μs...200ms
尺寸 (W H D)	Dimensions (W H D)	19" 3U 460mm	19" 6U 460mm	19" 9U 460mm
重量	Weight	19kg	29kg	39kg
产品编号	Article No.	33200244	33200245	33200248

EA-EL 3000 / EA-EL 9000 / EA-EL 9000 HP 400W - 7200W

直流电子负载 / ELECTRONIC DC LOADS

技术参数	Technical Data	EA-EL 9750-25 HP	EA-EL 9750-50 HP	EA-EL 9750-75 HP
最大输入功率	Power input maximum	2400W	4800W	7200W
40°C时恒定输入功率	Steady power input at 40°C	2400W	4800W	7200W
电压	Voltage			
- 调节范围	- Adjustment range	0...750V DC	0...750V DC	0...750V DC
- 分辨率	- Resolution	100mV	100mV	100mV
- 精确度	- Accuracy	≤0.1%	≤0.1%	≤0.1%
- 最大电流时的最小电压	- Min. voltage at max. current	约 / approx. 0.5V	约 / approx. 0.5V	约 / approx. 0.5V
电流	Current			
- 调节范围	- Adjustment range	0...25A	0...50A	0...75A
- 分辨率	- Resolution	10mA	10mA	10mA
- 精确度	- Accuracy	≤0.2%	≤0.2%	≤0.2%
功率	Power			
- 调节范围	- Adjustment range	0...2400W	0...4800W	0...7200W
- 分辨率	- Resolution	1W	1W	1W
- 精确度	- Accuracy	≤2%	≤2%	≤2%
内阻	Resistance			
- 调节范围 1	- Adjustment range 1	0...40Ω	0...20Ω	0...15Ω
- 分辨率	- Resolution	10mΩ	10mΩ	10mΩ
- 调节范围 2	- Adjustment range 2	0...800Ω	0...400Ω	0...300Ω
- 分辨率	- Resolution	100mΩ	100mΩ	100mΩ
- 精确度	- Accuracy	≤2%	≤2%	≤2%
动态函数	Dynamic function	2个级别 / 2 levels	2个级别 / 2 levels	2个级别 / 2 levels
- A / B 占空比级别	- Duty cycle level A / B	50μs...100s	50μs...100s	50μs...100s
- 各级别升降时间	- Level rise and fall time	30μs...200ms	30μs...200ms	30μs...200ms
尺寸 (W H D)	Dimensions (W H D)	19" 3U 460mm	19" 6U 460mm	19" 9U 460mm
重量	Weight	19kg	29kg	39kg
产品编号	Article number	33200249	33200250	33200251