

EA-PSI 9000 2U 1000 W - 3000 W 可编程实验室直流电源 / PROGRAMMABLE LABORATORY DC POWER SUPPLIES

	VIEW RUPY Save 1 Save 1 Sav	6501 V CV WORKEN 0.0A 0.0A
		EA-PSI 9080-120 2U
A 19" MS IFAB	 > 宽范围输入电压90264 V,带主动式PFC > 效率高达 93% > 输出功率: 01000 W 至03000 W > 输出电压: 040 V 至 0750 V > 输出电流: 04 A 至 0120 A > 灵活的功率调整输出级 > 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 > 远程感测端 > 隔离模拟接口 · 通过 010 V或05 V电压可对U/I/P编程 · 通过 010 V或05 V电压可对U/I/P编程 · 通过 010 V或05 V电压可达U/I > 具有真实函数发生器 > 光伏方阵模拟功能 > 内阻模拟与调整 > 温控风扇制冷 > 符合SELV标准 (EN 60950)的40 V产品型号 > 配放电电路(在10 s内Uout < 60 V) > 对更大的动态反应有高速选项 > 内置USB端口 > 可选数字接口模块或选择安装IEEE/GPIB端口 > 支持SCPI指令语言 	 Wide input voltage range 90264 V with active PFC High efficiency up to 93% Output power ratings: 01000 W up to 03000 W Output voltages: 040 V up to 0750 V Output currents: 04 A up to 0120 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 sensing Galvanically isolated analog interface with U / I / P programmable via 010 V or 05 V U / I monitoring via 010 V or 05 V Integrated true function generator Photovoltaic array simulation Internal resistance simulation and regulation Temperature controlled fans for cooling 40 V models according to SELV (EN 60950) Discharge circuit (U_{out} < 60 V in ≤ 10 s) High speed variants for increased dynamics USB port integrated Optional, digital interface modules or alternatively installed IEEE/GPIB port SCPI command language supported
	概要 EA-PSI 9000 2U 系列是一款由微处理器控制的实验室电源。 它立足于让用户易懂、且可交互式操作的概念,配备一套完整 的标准功能。输出参数,监控功能与其它设定,以及可更换式 数字接口模块配合极其巧妙且操作轻松。	General The microprocessor controlled laboratory power supplies of series EA-PSI 9000 2U offer a user-friendly, interactive han- dling concept, along with a remarkable set of standard features, which can facilitate operating them. Configuration of output pa- rameters, supervision features and other settings, as well as the replaceable digital interface modules is smart and comfortable.
	所有输出参数的监控功能可帮助用户减少测试设备,几乎可 不用安装外部监控硬件与软件。由两旋钮,一个按钮,两个 LED 以及 TET 彩色触摸屋组成的控制面板,让田户动田一下	The implemented supervision features for all output parameters can help to reduce test equipment and make it almost unnec- essary to install external supervision hardware and software.

essary to install external supervision hardware and software. The clear control panel with its two knobs, one pushbutton, two LEDs and the touch panel with colour TFT display for all important values and status enable the user to handle the device easily with a few touches of a finger.

For the integration into semi-automatic and remotely controlled test and automation systems, the devices offer a set of interfaces (analog and digital) on their rear side.

LED 以及 TFT 彩色触摸屏组成的控制面板,让用户动用一下

若应用到半自动与远程控制测试和自动化系统内,本产品后面

手指,轻触几下就能轻易操作本设备。

还配有一套接口(模拟与数字的都有)。

AC输入

本系列采用主动式功率因数校正, $1.5 \, kW$ 以下的产品适用于90 V_{AC}至264 V_{AC}的全球性输入电压。功率为 $1.5 \, kW$ 的型号在输入 电压低于150 V_{AC}时总输出功率将降至1 kW,而3 kW的型号在 输入电压低于205 V_{AC}时总输出功率将降至2.5 kW。

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。



AC input

All units are provided with an active Power Factor Correction circuit and models up to 1.5 kW are suitable for a worldwide usage on a mains supply from 90 V_{AC} up to 264 V_{AC} . With the 1.5 kW models, the output power is automatically reduced to 1 kW if the supply voltage is <150 V_{AC} and with the 3 kW models is reduced to 2.5 kW at <205 V_{AC}.

Auto-ranging power stage

UN

直流输出

本系列有多款不同型号,可选择0...40 V和0...750 V输出电 压, 0...4 A和0...120 A输出电流, 0...1000 W和0...3000 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。

输出端位于产品后面板上。

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

为保护连接设备,可给产品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。

内置模拟接口

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电压,可 设置0...100%的输出电压、电流与功率。模拟输 出脚接上0V...10V或0V...5V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。

U prog>	10		-	U mon
l prog>	•			
U ref. ←		•	\rightarrow	I mon.
		•		AGND
DGND			\rightarrow	+12V
$RC \rightarrow$	•		-	RSD
от 🔶	•	2		
		•		OVP
P prog>	8	•	\rightarrow	CV

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 single unit.

DC output

DC output voltages between 0...40 V and 0...750 V, output currents between 0...4 A and 0...120 A and output powers between 0...1000 W and 0...3000 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 terminal is located on the rear panel of the devices.

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

Built-in 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.

E A





Display and control panel



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。

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。



Triangle

三角形





Rectangle 矩形

Trapezoid 梯形

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.



Sine

正弦



Ramp

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。

主-从

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。

Master-Slave

All models feature a serial master-slave bus by default. It can be used to connect up to 10 units of identical models in parallel operation or even series operation to a bigger system with totals formation of the actual value of voltage, current and power. The configuration is either completely done on the control panels of the units or via remote control (digital communication 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".

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

The sequences can be loaded from and saved to a standard

USB flash drive via the USB port on the front panel, making it

Fictional example of a complex function (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:

testing purposed in development and production.

easy to change between different test sequences.

There is furthermore a XY generator, which is used to generate other functions, such as 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.



高速选项

本系列除了标准型号外,还有一个高速版(品名后缀为:HS)。该版本输出电压动态的反应有很大提升,上升和下降时间极度减少,全归因于产品输出端安排了小电容与合理的电压控制器。见151页。我们可以做个比较:PSI 9080-60 2U标准型号的输出电容为5440 µF,而同型号带高速功能的仅为86 µF。



High speed versions

Alternatively to the standard models of this series, so-called high speed versions (product name appendix: HS) of the standard models are available. They offer significantly improved output voltage dynamics, along with decreased rise and fall times, all due to lower output capacity and an optimised voltage controller. Also see page 151. For comparison: the base version of model PSI

9080-60 2U has 5440 μ F output capacity, while the corresponding high speed version only has 86 μ F.

In the technical specifications tables below, the HS models are listed separately with extra, high-speed relevant and significant specifications.

Together with the advantages from the reduced output capacity there are also unavoidable disadvantages, like higher noise (ripple) and higher overshoots of the output voltage after crossover from constant current (CC) to constant voltage (CV) or higher undershoots on load steps. The height of the overshot can reach up to 10% of the nominal output voltage of the particular model and is also depending on the kind of the attached load (resistive, capacitive, inductive).

Options

- Isolated digital interface modules for RS232, CAN, CANopen, Modbus TCP, Profibus, Profinet/IO, 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. Also see page 138.
- Three-way interface (3 W) with a rigid GPIB port installed instead of the default slot for retrofittable interface modules.



由于输出电容减小这个优势,随之带来一个劣势,就是从恒流 (CC)转换到恒压(CV)时,噪音更大,输出电压会过冲更 多,或者在带载阶跃时负尖峰更高。过冲高度可能会达到额定 输出电压的10%,有时也取决于连接的负载类型(阻性负载, 容性负载,感性负载)。

选购件

- 适合RS232、CAN、CANopen、Modbus TCP、Profibus、 Profinet/IO、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(3W),而非接口模 块用的默认插槽。







带3 W选项的后视图 / Rear view with option 3 W

EA



技术参数

EA-PSI 9000 2U 1000 W - 3000 W 可编程实验室直流电源 / PROGRAMMABLE LABORATORY DC POWER SUPPLIES

Technical Data

12小学奴	recinical Data	Series EA-PSI 5000 20 7 余列				
AC输入电压	Input AC					
- 电压	- Voltage	90264 V, 1ph+N (针对 / Models 1000 W - 1500 W) 180264 V, 1ph+N (针对 / Models 3000 W)				
- 频率	- Frequency	4566 Hz				
- 功率因数	- Power factor	>0.99				
- 功率降额	- Derating	型号 / Models 1500 W: < 150 V AC 降至 / to Pout max 1000 W 型号 / Models 3000 W: < 207 V AC 降至 / to Pout max 2500 W				
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%				
-±10% ΔU _{AC} 时的线性调整率	- Line regulation ±10% ΔU_{AC}	<0.02%				
-负载从10%-100%调整需时	- Regulation 10-100% load	<2 ms (标准型号 / Standard models) <5 ms (带高速选项功能的型号 / High speed versions)				
- 负载从10-90%上升需时	- Rise time 10-90%	最长30 ms (标准型号 / Standard models) 最长10ms (H带高速选项功能的型号 / High speed versions)				
- 过压保护	- Overvoltage protection	可调,范围为0110% Unenn / Adjustable, 0110% Unom				
输出电流	Output current					
- 精确度	- Accuracy	<0.2%				
-0-100% ∆U _{DC} 的负载调整率	- Load regulation 0-100% $\Delta U_{\mbox{\tiny DC}}$	<0.15%				
-±10% ∆U _{AC} 时的线性调整率	- Line regulation ±10% $\Delta U_{\mbox{\tiny AC}}$	<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	OTP, OVP, OCP, OPP, PF (1				
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	负极:最大400 V DC;正极:最大400 V DC +输出电压 / Negative: max. 400 V DC, positive: max. 400 V DC + output voltage				
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)				
模拟接口	Analog interface	内置15-针D-Sub母插,电隔离 / Built in, 15-pole D-Sub (female), galvanically isolated				
- 输入范围	- Input range	05 V 或 010 V (可转换) / 05 V or 010 V (switchable)				
- U / I / P / R的精确度	- Accuracy U/I/P/R	010 V: <0.1% 05 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				
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(经共享总线) / Yes, with true master-slave, up to 10 units (via Share bus)				
安全标准	Standards	EN 60950, EN61326, EN 55022 Class B 等级 B				
制冷	Cooling	风扇 / Fan(s)				
工作温度	Operation temperature	050°C				
储存温度	Storage temperature	-2070°C				
相对湿度	Humidity	<80%				
使用高度	Operation altitude	<2000 m				
机械特征	Mechanics	1000 W / 1500 W 3000 W				
- 重量 (2	- Weight ⁽²	11.5 kg 14.7 kg				
- 产品尺寸(宽x高x长) ⁽³ (1 见第152页/ See page 152	- Dimensions (W H D) ⁽³	19" 2 HE/U 465 mm 19" 2 HE/U 465 mm				

Series EA-PSI 9000 2U / 系列

(1 见第152页/ See page 152 (2 为标准型号参数,带选项功能的则会有变化 / Standard version, models with options may vary (3为标准型号的外壳尺寸,非整体尺寸,且带选项功能的还会有变化 / Enclosure of the standard version and not overall size, versions with options may vary



标准型号规格 / Standard models

型号	电压	电流	功率	效率	纹波 / Ripple ⁽²		编程 / Programming ⁽¹			订购编号◎
Model	Voltage	Current	Power	Efficiency	U (max.)	l (max.)	U (typ.)	l (typ.)	P (typ.)	Ordering number
PSI 9040-40 2U	040 V	040 A	01000 W	≤92%	114 mV _{PP} / 8 mV _{RMS}	3.7 mA _{RMS}	≈1.5 mV	≈1.5 mA	≈38 mW	06230319
PSI 9080-40 2U	080 V	040 A	01000 W	≤92%	114 mV _{PP} / 8 mV _{RMS}	3.7 mA _{RMS}	≈3 mV	≈1.5 mA	≈38 mW	06230304
PSI 9200-15 2U	0200 V	015 A	01000 W	≤93%	164 mV _{PP} / 34 mV _{RMS}	2.2 mA _{RMS}	≈7.6 mV	≈0.6 mA	≈38 mW	06230305
PSI 9360-10 2U	0360 V	010 A	01000 W	≤93%	$210 \mathrm{mV}_{\mathrm{PP}} / 59 \mathrm{mV}_{\mathrm{RMS}}$	1.6 mA _{RMS}	≈13.7 mV	≈0.4 mA	≈38 mW	06230306
PSI 9500-06 2U	0500 V	06 A	01000 W	≤93%	$190 mV_{PP} / 48 mV_{RMS}$	0.5 mA _{RMS}	≈19 mV	≈0.23 mA	≈38 mW	06230307
PSI 9750-04 2U	0750 V	04 A	01000 W	≤93%	$212mV_{PP}/60mV_{RMS}$	0.3 mA _{RMS}	≈28.6 mV	≈0.15 mA	≈38 mW	06230308
PSI 9040-60 2U	040 V	060 A	01500 W	≤92%	114 mV _{PP} / 8 mV _{RMS}	5.6 mA _{RMS}	≈1.5 mV	≈2.3 mA	≈57 mW	06230320
PSI 9080-60 2U	080 V	060 A	01500 W	≤92%	114 mV _{PP} / 8 mV _{RMS}	5.6 mA _{RMS}	≈3 mV	≈2.3 mA	≈57 mW	06230309
PSI 9200-25 2U	0200 V	025 A	01500 W	≤93%	$164 \mathrm{mV}_{\mathrm{PP}} / 34 \mathrm{mV}_{\mathrm{RMS}}$	3.3 mA _{RMS}	≈7.6 mV	≈1 mA	≈57 mW	06230310
PSI 9360-15 2U	0360 V	015 A	01500 W	≤93%	$210mV_{PP}/59mV_{RMS}$	2.4 mA _{RMS}	≈13.7 mV	≈0.6 mA	≈57 mW	06230311
PSI 9500-10 2U	0500 V	010 A	01500 W	≤93%	$190mV_{PP}/48mV_{RMS}$	0.7 mA _{RMS}	≈19 mV	≈0.4 mA	≈57 mW	06230312
PSI 9750-06 2U	0750 V	06 A	01500 W	≤93%	$212mV_{PP}/60mV_{RMS}$	0.5 mA _{RMS}	≈28.6 mV	≈0.23 mA	≈57 mW	06230313
PSI 9040-120 2U	040 V	0120 A	03000 W	≤92%	114 mV _{PP} / 8 mV _{RMS}	11 mA _{RMS}	≈3 mV	≈4.6 mA	≈114 mW	06230321
PSI 9080-120 2U	080 V	0120 A	03000 W	≤92%	114 mV _{PP} / 8 mV _{RMS}	11 mA _{RMS}	≈1.5 mV	≈4.6 mA	≈114 mW	06230314
PSI 9200-50 2U	0200 V	050 A	03000 W	≤93%	$164mV_{PP}/34mV_{RMS}$	6.5 mA _{RMS}	≈7.6 mV	≈1.9 mA	≈114 mW	06230315
PSI 9360-30 2U	0360 V	030 A	03000 W	≤93%	$210 mV_{PP}$ / $59 mV_{RMS}$	15 mA _{RMS}	≈13.7 mV	≈1.2 mA	≈114 mW	06230316
PSI 9500-20 2U	0500 V	020 A	03000 W	≤93%	$190 mV_{PP} / 48 mV_{RMS}$	1.5 mA _{RMS}	≈19 mV	≈0.8 mA	≈114 mW	06230317
PSI 9750-12 2U	0750 V	012 A	03000 W	≤93%	$212mV_{PP}/60mV_{RMS}$	0.9 mA _{RMS}	≈28.6 mV	≈0.5 mA	≈114 mW	06230318

(1无产品错误时的可编程分辨率 / Programmable resolution without device error

(2 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 (3 标准型号的产品编码,带3 W选项功能的编码则会不同 / Ordering number of the standard version, models with option 3 W installed have different Ordering numbers.

高速选项的参数

注意:带高速选项功能的型号主要是其输出电容与噪音(即: 纹波)与标准型号不同。

High speed models

Note: the high speeds models primarily differ from the standard models regarding output capacity and noise (i.e. ripple).

型号	电压	电流	功率	U最大时的纹波。	输出电容	下降时间 ⁽²	订购编号 ⁽³
Model	Voltage	Current	Power	Ripple U max. (1	Output capacity	Fall time (2	Ordering number ⁽³
PSI 9040-40 2U HS	040 V	040 A	01000 W	500 mV _{PP} / 64 mV _{RMS}	86 µF	< 146 ms	06730319
PSI 9080-40 2U HS	080 V	040 A	01000 W	500 mV _{PP} / 64 mV _{RMS}	86 µF	< 146 ms	06730304
PSI 9200-15 2U HS	0200 V	015 A	01000 W	450 mV _{PP} / 17 mV _{RMS}	40 µF	< 266 ms	06730305
PSI 9360-10 2U HS	0360 V	010 A	01000 W	1200 mV _{PP} / 48 mV _{RMS}	20 µF	< 479 ms	06730306
PSI 9500-06 2U HS	0500 V	06 A	01000 W	700 mV _{PP} / 24 mV _{RMS}	15 µF	< 688 ms	06730307
PSI 9750-04 2U HS	0750 V	04 A	01000 W	680 mV _{PP} / 44 mV _{RMS}	9 µF	< 1037 ms	06730308
PSI 9040-60 2U HS	040 V	060 A	01500 W	500 mV _{PP} / 64 mV _{RMS}	86 µF	< 146 ms	06730320
PSI 9080-60 2U HS	080 V	060 A	01500 W	500 mV _{PP} / 64 mV _{RMS}	86 µF	< 146 ms	06730309
PSI 9200-25 2U HS	0200 V	025 A	01500 W	450 mV _{PP} / 17 mV _{RMS}	40 µF	< 266 ms	06730310
PSI 9360-15 2U HS	0360 V	015 A	01500 W	1200 mV _{PP} / 48 mV _{RMS}	20 µF	< 479 ms	06730311
PSI 9500-10 2U HS	0500 V	010 A	01500 W	700 mV _{PP} / 24 mV _{RMS}	15 µF	< 688 ms	06730312
PSI 9750-06 2U HS	0750 V	06 A	01500 W	680 mV _{PP} / 44 mV _{RMS}	9 µF	< 1037 ms	06730313
PSI 9040-120 2U HS	040 V	0120 A	03000 W	500 mV _{PP} / 64 mV _{RMS}	172 µF	< 146 ms	06730321
PSI 9080-120 2U HS	080 V	0120 A	03000 W	500 mV _{PP} / 64 mV _{RMS}	172 µF	< 146 ms	06730314
PSI 9200-50 2U HS	0200 V	050 A	03000 W	450 mV _{PP} / 17 mV _{RMS}	80 µF	< 266 ms	06730315
PSI 9360-30 2U HS	0360 V	030 A	03000 W	1200 mV _{PP} / 48 mV _{RMS}	40 µF	< 479 ms	06730316
PSI 9500-20 2U HS	0500 V	020 A	03000 W	700 mV _{PP} / 24 mV _{RMS}	30 µF	< 688 ms	06730317
PSI 9750-12 2U HS	0750 V	012 A	03000 W	680 mV _{PP} / 44 mV _{RMS}	18 µF	< 1037 ms	06730318

(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 为直流输出带1%负载时的100%-1% U_{Nom} 参数 / 100%-1% U_{Nom} at approx. 1% load on DC output

(3 标准型号的产品编码,带3 W选项功能的编码则会不同 / Ordering number of the standard version, models with option 3 W installed have different Ordering numbers.