

EA-PSI 9000 15U/24U 30 kW - 90 kW



Programmable high efficiency DC Power supplies



- For wide range 342...528 V AC supply
- Wide AC supply voltage range for operation on 380 V, 400 V and 480 V grids
- Output power ratings between 30 kW and 90 kW
- Output voltages: 80 V, 200 V, 360 V, 500 V, 750 V, 1000 V and 1500 V
- Currents of up to 3060 A
- Pre-configured, pre-wired, ready to be installed
- Includes power supplies of series EA-PSI 9000 WR and EA-PSI 9000 WR Slave with:
 - True function generator
 - USB and analog interface built in
 - Slot for optional interface modules for Profinet, Profibus, CAN, CANopen, Ethernet, EtherCAT, ModBus TCP
 - SCPI command language & ModBus RTU
 - Multilingual color TFT touch panel

General

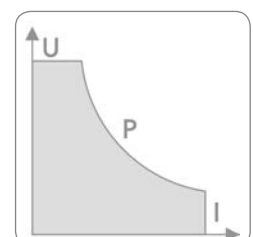
The series EA-PSI 9000 15U/24U extends the power supply series EA-PSI 9000 3U with high power models in standard 19" cabinets. There is a choice of 35 different configurations in 5 power ratings.

A cabinet system is considered as one big power supply device with extended power, manual handling and remote control being as usual, while also offering the same features like the single models of EA-PSI 9000 3U series.

There are two base cabinets, one with 15 U of height for 30 kW and 45 kW and one with 24 U of height for 60 kW, 75 kW and 90 kW. The cabinet itself has lockable rear and front doors, as well as four casters which can be fixed. The system will be shipped completely configured and will be ready to use right after installation on location.

Autorangeing power stage

All models are equipped with a flexible autorangeing 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 adjustable power set value or the rated power. Therefore, a wide range of applications can already be covered by the use of just one unit.



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DC output

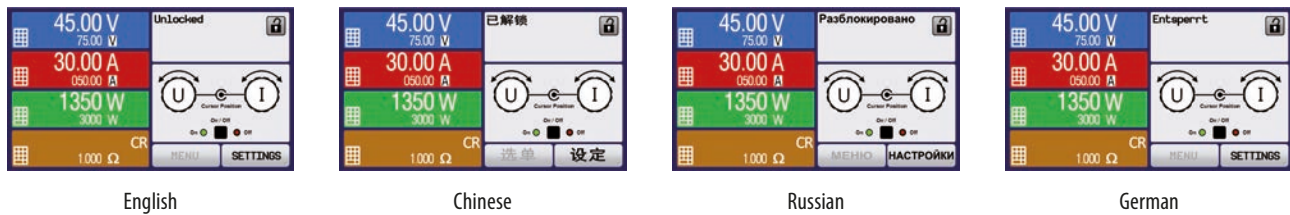
DC output voltages between 0...80 V and 0...1500 V, output currents between 0...60 A and 0...3060 A and output power ratings of 0...30 kW, 0...45 kW, 0...60 kW, 0...75 kW or 0...90 kW are available. The output terminal is located on the rear panel.

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 color TFT screen is touch sensitive and can be intuitively used to control all functions of the device with just a finger tip.

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.

Multi-language screen



Function generator

All models of 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.

Options

- Digital interface modules for RS232, CAN, CANopen, ModBus TCP, Profibus, Profinet/IO, EtherCAT 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 116.
- Water cooling (upon request, also see page 121)
- Emergency stop system with stop switch, door contacts and screw terminals for external breaker contacts



Rear view 24U 90 kW



DC bus terminal



AC input terminal



EA-PSI 9000 15U/24U 30 kW - 90 kW



Model	Voltage	Current	Power	Insulation DC <> PE		Height	Ordering number
				DC -	DC ±		
PSI 9080-1020 15U	0...80 V	0...1020 A	0...30 kW	± 400 V	± 400 V	15U	inquire
PSI 9200-420 15U	0...200 V	0...420 A	0...30 kW	± 725 V	± 1000 V	15U	inquire
PSI 9360-240 15U	0...360 V	0...240 A	0...30 kW	± 725 V	± 1000 V	15U	inquire
PSI 9500-180 15U	0...500 V	0...180 A	0...30 kW	± 1500 V	± 1800 V	15U	inquire
PSI 9750-120 15U	0...750 V	0...120 A	0...30 kW	± 1500 V	± 1800 V	15U	inquire
PSI 91000-80 15U	0...1000 V	0...80 A	0...30 kW	± 1500 V	± 1800 V	15U	inquire
PSI 91500-60 15U	0...1500 V	0...60 A	0...30 kW	± 1500 V	± 1800 V	15U	inquire
PSI 9080-1530 15U	0...80 V	0...1530 A	0...45 kW	± 400 V	± 400 V	15U	inquire
PSI 9200-630 15U	0...200 V	0...630 A	0...45 kW	± 725 V	± 1000 V	15U	inquire
PSI 9360-360 15U	0...360 V	0...360 A	0...45 kW	± 725 V	± 1000 V	15U	inquire
PSI 9500-270 15U	0...500 V	0...270 A	0...45 kW	± 1500 V	± 1800 V	15U	inquire
PSI 9750-180 15U	0...750 V	0...180 A	0...45 kW	± 1500 V	± 1800 V	15U	inquire
PSI 91000-120 15U	0...1000 V	0...120 A	0...45 kW	± 1500 V	± 1800 V	15U	inquire
PSI 91500-90 15U	0...1500 V	0...90 A	0...45 kW	± 1500 V	± 1800 V	15U	inquire
PSI 9080-2040 24U	0...80 V	0...2040 A	0...60 kW	± 400 V	± 400 V	24U	inquire
PSI 9200-840 24U	0...200 V	0...840 A	0...60 kW	± 725 V	± 1000 V	24U	inquire
PSI 9360-480 24U	0...360 V	0...480 A	0...60 kW	± 725 V	± 1000 V	24U	inquire
PSI 9500-360 24U	0...500 V	0...360 A	0...60 kW	± 1500 V	± 1800 V	24U	inquire
PSI 9750-240 24U	0...750 V	0...240 A	0...60 kW	± 1500 V	± 1800 V	24U	inquire
PSI 91000-160 24U	0...1000 V	0...160 A	0...60 kW	± 1500 V	± 1800 V	24U	inquire
PSI 91500-120 24U	0...1500 V	0...120 A	0...60 kW	± 1500 V	± 1800 V	24U	inquire
PSI 9080-2550 24U	0...80 V	0...2550 A	0...75 kW	± 400 V	± 400 V	24U	inquire
PSI 9200-1050 24U	0...200 V	0...1050 A	0...75 kW	± 725 V	± 1000 V	24U	inquire
PSI 9360-600 24U	0...360 V	0...600 A	0...75 kW	± 725 V	± 1000 V	24U	inquire
PSI 9500-450 24U	0...500 V	0...450 A	0...75 kW	± 1500 V	± 1800 V	24U	inquire
PSI 9750-300 24U	0...750 V	0...300 A	0...75 kW	± 1500 V	± 1800 V	24U	inquire
PSI 91000-200 24U	0...1000 V	0...200 A	0...75 kW	± 1500 V	± 1800 V	24U	inquire
PSI 91500-150 24U	0...1500 V	0...150 A	0...75 kW	± 1500 V	± 1800 V	24U	inquire
PSI 9080-3060 24U	0...80 V	0...3060 A	0...90 kW	± 400 V	± 400 V	24U	inquire
PSI 9200-1260 24U	0...200 V	0...1260 A	0...90 kW	± 725 V	± 1000 V	24U	inquire
PSI 9360-720 24U	0...360 V	0...720 A	0...90 kW	± 725 V	± 1000 V	24U	inquire
PSI 9500-540 24U	0...500 V	0...540 A	0...90 kW	± 1500 V	± 1800 V	24U	inquire
PSI 9750-360 24U	0...750 V	0...360 A	0...90 kW	± 1500 V	± 1800 V	24U	inquire
PSI 91000-240 24U	0...1000 V	0...240 A	0...90 kW	± 1500 V	± 1800 V	24U	inquire
PSI 91500-180 24U	0...1500 V	0...180 A	0...90 kW	± 1500 V	± 1800 V	24U	inquire

EA-PSI 9000 15U/24U 30 kW - 90 kW

Technical Data	Series EA-PSI 9000 15U & EA-PSI 9000 24U	
AC: Supply		
- Voltage	342...528 V, 3ph	
- Frequency	45...66 Hz	
- Power factor	>0.99	
DC: Voltage		
- Accuracy	<0.1% of rated value	
- Load regulation 0-100%	<0.05% of rated value	
- Line regulation $\pm 10\% \Delta U_{AC}$	<0.02% of rated value	
- Regulation 10-100% load	<2 ms	
- Slew rate 10-90%	Max. 30 ms	
- Overvoltage protection	Adjustable, 0...110% U_{Nom}	
- No load discharge time on DC off	100% U to <60 V: less than 10 s	
DC: Current		
- Accuracy	<0.2% of rating	
- Load regulation 0-100% ΔU_{DC}	<0.15% of rated value	
- Line regulation $\pm 10\% \Delta U_{AC}$	<0.05% of rated value	
DC: Power		
- Accuracy	<1% of rated value	
Overvoltage category	2	
Protection	OT, OVP, OPP, OCP, PF ⁽¹⁾	
Insulation		
- AC input to enclosure	2500 V DC	
- AC input to DC output	2500 V DC	
- DC output to enclosure (PE)	Depending on model, see model table	
Degree of pollution	2	
Protection class	1	
Display and panel	Graphics display with touch panel	
Digital interfaces		
- Built-in	1x USB type B for communication	
- Slot	1x for retrofittable plug-in modules	
Analog interface	Built in, 15 pole D-Sub (female), galvanically isolated	
- Signal range	0...5 V or 0...10 V (switchable)	
- Accuracy U / I / P / R	0...10 V: <0.2%	0...5 V: <0.4%
Series operation	No	
Parallel operation	No	
Standards	EN 61010, EN 61000-6-2:2016-05 and IEC 61000-6-3:2011-09 Class B	
Cooling	Temperature-controlled fans (optional: water)	
Ambient temperature	0...40 °C	
Storage temperature	-20...70 °C	
Relative humidity	<80%, non-condensing	
Operation altitude	<2000 m (1.242 mi)	
Dimensions (W x H x D)	15U models: 60 cm x 95 cm x 100 cm (23.6" x 37.4" x 39.4") 24U models: 60 cm x 135 cm x 100 cm (23.6" x 53.1" x 39.4")	

⁽¹⁾ See page 126

