

PS 9000 1U Series

1500 W to 3000 W



Programmable
DC Power
Supplies

INTEPRO
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1500 W to 3000 W



Product Overview



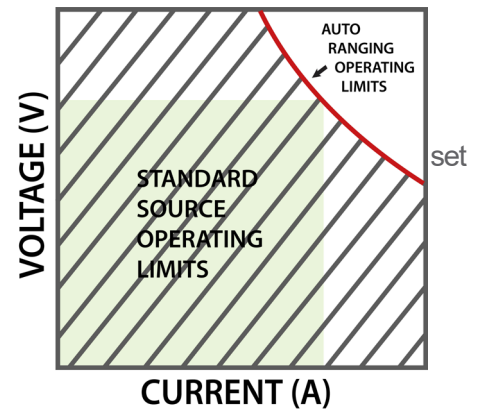
PS 9000 1U

The PS 9000 1U offers an easy and effective auto-ranging DC power supply all in a flat design with only 1.75" of height. All units are provided with an active Power Factor Correction circuit and 1.5kW models are suitable for worldwide operation as they operate on 100-264 VAC.

Both power classes reduce the output power automatically when the input supply is low, so the 1.5 kW models can still provide 1 kW power with an input supply of 100...150 VAC and the 3 kW models can still provide 2.5 kW at 180...207 VAC.

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 power value is adjustable with these models. Therefore, a wide range of applications can already be covered by a single unit.



Applications

The PS 9000 Series is an auto-ranging programmable DC Supply that employs state-of-the-art technology efficiently to help you power through a wide array of applications. It has been used for burn-in and EOL/Production as well as in R&D/Lab environments for Medical Device, Communications, EMC and MIL/Defense applications. The built in standard features provides for a versatile device that really stands out in just about any test environment.

DC Output

DC output voltages between 0...80 V and 0...750 V, output currents between 0...6 A and 0...100 A and output power ratings of 0...1500 W or 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 DC output is located on the rear panel of the devices.

Featured Benefits

- *Wide input range 100...264 V (1500W models)*
- *High efficiency up to 95%*
- *Output power ratings: 0...1500 W or 0...3000 W*
- *Output voltages: 0...40 V up to 0...750 V*
- *Output currents: 0...6 A up to 0...100 A*
- *Flexible, power regulated output stage*
- *Various protection circuits (OVP, OCP, OPP, OTP)*
- *Control panel with pushbuttons and blue LCD for actual values, set values, status and alarms*
- *Remote sensing*
- *Galvanically isolated, analog interface with:*
 - *U / I / P programmable via 0...10 V or 0...5 V*
 - *U / I monitoring via 0...10 V or 0...5 V*
- *Very low height of only 1 U (44 mm)*
- *Temperature controlled fans for cooling*
- *Standard USB and Ethernet port integrated*
- *EMC according to EN 55022 Class B*
- *SCPI command language supported*

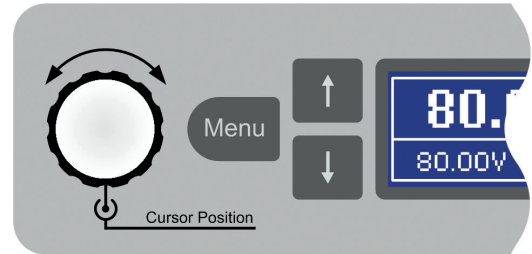
Remote Sensing

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

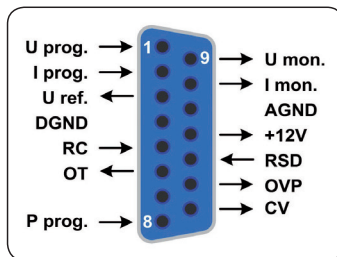
Display & Controls

Set values and actual values of output voltage, output current and output power are clearly represented on the graphic display. The LCD display can be intuitively used to control all functions of the device with just a finger.

Set values of voltage, current, power or resistance can be adjusted using the rotary knobs.



To prevent unintentional operations, all operation controls can be locked.



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.

Digital Interfaces

All models features two galvanically isolated, digital interfaces by default. It is 1x USB and 1x Ethernet. Both can be used to control and monitor the devices with SCPI language commands or Modbus protocol.

Options

- GPIB

Technical Data	Series PS 9000 1U	
Input AC		
- Voltage	100...264 V, 1ph+N (Models 1500 W), 180...264 V, 1ph+N (Models 3000 W), 180...265 V, 2ph+N (Models 3000W)	
- Frequency	45...65 Hz	
- Power factor	>0.99	
Output: Voltage DC		
- Accuracy	<0.1%	
- Load regulation 0-100%	<0.05%	
- Line regulation $\pm 10\% \Delta U_{AC}$	<0.02%	
- Regulation 10-100% load	<2.2 ms	
- Rise time 10-90% (CV)	Max. 15 ms	
Output: Current		
- Accuracy	<0.2%	
- Load regulation 0-100% ΔI	<0.15%	
- Line regulation $\pm 10\% \Delta U_{AC}$	<0.05%	
Output power		
- Accuracy	<1%	
Overvoltage category	2	
Protection	OTP, OVP, OCP, OPP, PF ⁽¹⁾	
Isolation		
- Input to enclosure	2500 V DC	
- Input to output	2500 V DC	
- Output to enclosure (PE)	Negative: max. 400 V DC, positive: max. 400 V DC + output voltage	
Pollution degree	2	
Protection class	1	
Analog interface	Built in, 15-pole D-Sub, female	
- Input range	0...5 V or 0...10 V (switchable)	
- Accuracy U / I	0...10 V: <0.2%	0...5 V: <0.4%
- Programming resolution	See table below	
Series operation	Possible (with max. potential of all negative outputs 400 V DC against PE)	
- Master-Slave	No	
Parallel operation	Possible, via Share Bus operation or via analog interface	
- Master-Slave	Restricted	
Standards	EN 60950, EN 61326, EN 55022 Class B	
Cooling	Fan(s)	
Operation temperature	0...50 °C	
Storage temperature	-20...70 °C	
Humidity	<80%	
Operation altitude	<2000 m	
	1500 W	3000 W
Weight ⁽¹⁾	~10.5 kg	~11 kg
Dimensions (W H D) ⁽²⁾	19" 1 HE/U 463 mm	19" 1 HE/U 463 mm

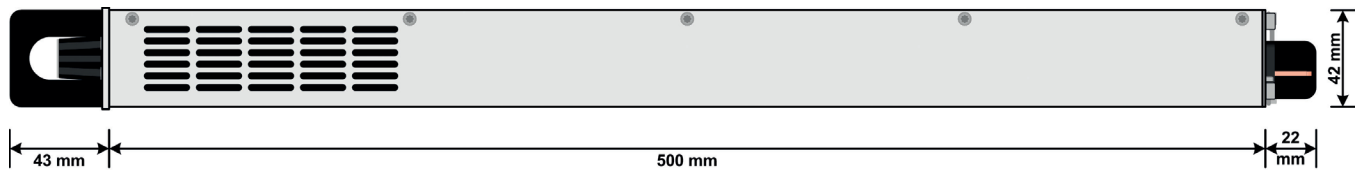
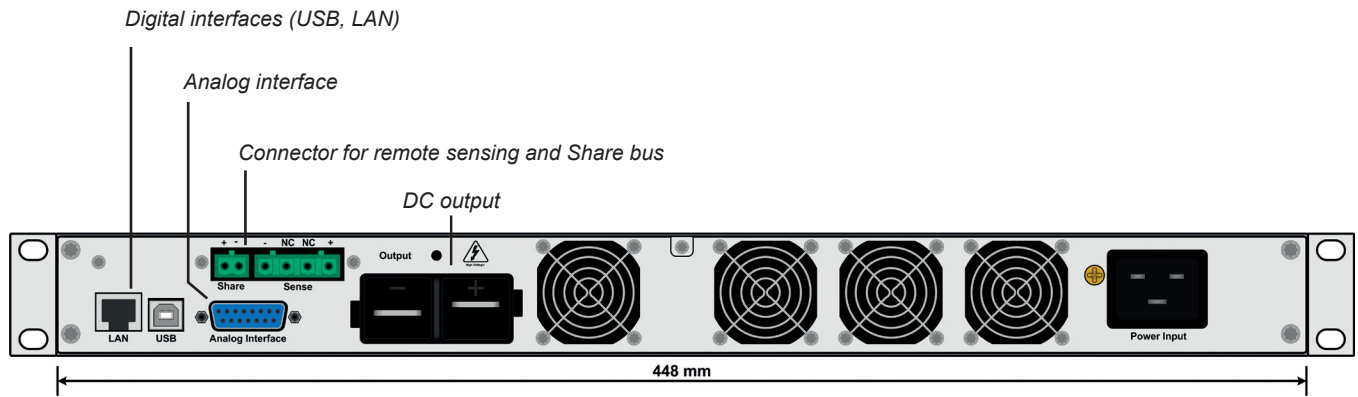
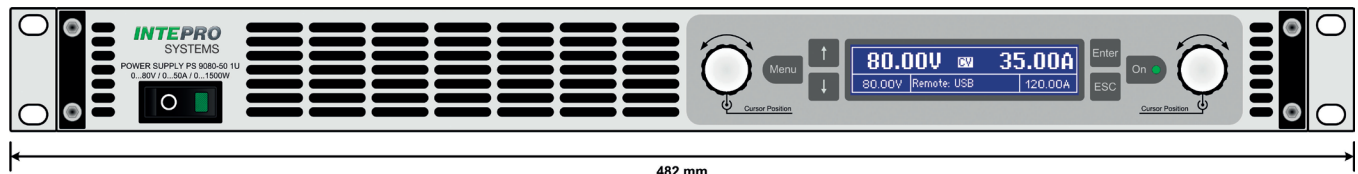
⁽¹⁾ Standard version, models with options may vary

⁽²⁾ Enclosure of the standard version and not overall size, versions with options may vary

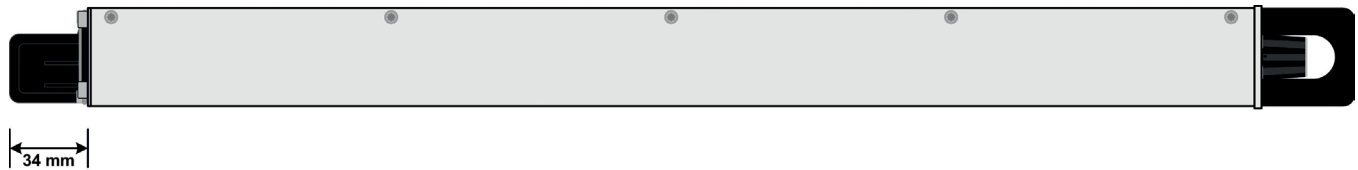
Model	Voltage	Current	Power	Efficiency	Ripple U max.	Ripple I max.	U (typ.)	I (typ.)
PS 9080-50 1U	0...80 V	0...50 A	0...1500 W	≤91%	100 mV _{PP} / 5.2 mV _{RMS}	75 mA _{PP}	3 mV	2 mA
PS 9200-25 1U	0...200 V	0...25 A	0...1500 W	≤93%	293 mV _{PP} / 51 mV _{RMS}	29 mA _{PP}	8 mV	1 mA
PS 9360-15 1U	0...360 V	0...15 A	0...1500 W	≤94%	195 mV _{PP} / 33 mV _{RMS}	10 mA _{PP}	14 mV	0.6 mA
PS 9500-10 1U	0...500 V	0...10 A	0...1500 W	≤94%	293 mV _{PP} / 63 mV _{RMS}	9.2 mA _{PP}	20 mV	0.4 mA
PS 9750-06 1U	0...750 V	0...6 A	0...1500 W	≤95%	260 mV _{PP} / 40 mV _{RMS}	4.1 mA _{PP}	30 mV	0.25 mA
PS 9080-100 1U	0...80 V	0...100 A	0...3000 W	≤92%	76 mV _{PP} / 4.2 mV _{RMS}	114 mA _{PP}	3 mV	4 mA
PS 9200-50 1U	0...200 V	0...50 A	0...3000 W	≤93%	234 mV _{PP} / 40 mV _{RMS}	29 mA _{PP}	8 mV	2 mA
PS 9360-30 1U	0...360 V	0...30 A	0...3000 W	≤93%	156 mV _{PP} / 26 mV _{RMS}	10 mA _{PP}	14 mV	1.5 mA
PS 9500-20 1U	0...500 V	0...20 A	0...3000 W	≤93%	234 mV _{PP} / 50 mV _{RMS}	9.2 mA _{PP}	20 mV	0.8 mA
PS 9750-12 1U	0...750 V	0...12 A	0...3000 W	≤93%	260 mV _{PP} / 40 mV _{RMS}	4.1 mA _{PP}	30 mV	0.5 mA

(1 Programmable resolution without device error

(2 RMS value: measures at LF with BWL 300kHz, PP value: measured at HF with BWL 20MHz



View from the right side



View from the left side, with DC cover

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