HEINZINGER
HIGH VOLTAGE – SMART SOLUTIONS

PNC*hp*

High Voltage Power Supplies

for High Precision Applications up to 10 ppm

Cal Power
Via Acquanera, 29 22100 COMO
tel. 031.526.566 (r.a.) fax 031.507.984
info@calpower.it www.calpower.it

PNC*hp* Series

Highlights

- Voltages up to 300,000V
- Low residual ripple and excellent long term stability up to 0.001%
- Output power up to 6,000 Watt
- Continuous short circuit proof
- Reserve voltage proof
- HV on/off via push button or interface
- Operation is possible as voltage or current source (CV-mode or CC-mode).
- Suitable for resistive, inductive and capacitive loads
- Setting of the output values through 10-turn potentiometers, separately for voltage and current
- Remotely controllable and extendable by means of the integrated analog interface 0...10V.
- Power supplies >10kV with sealed HV unit therefore have compact dimensions and longterm stability

High Precision Power Supplies **PNC*hp*** Series are approved for all High Voltage applications where the **PNC** and **PNC*3p*** Series can be applied.

The High Voltage Power Supplies, PNChp-Series already offers best ripple and stability of <0.001 %. The temperature coefficient and log-term stability are also specified in this range. Absolute reproducibility and highest quality standards may be achieved in production lines as well as highly complex design and research applications in the diverse fields of R&D. The Heinzinger PNChp series are available for most of the PNC and PNC3p units. The high accuracy is independent of the power supply power rating.

The PNChp line functions similarly as in the description for the PNC and PNC3p product line. Through additional design modifications, optimized electrical design and the careful selection of high precision components, the output performance has been improved. Innovative cooling concepts to achieve best long-term stability, as well as years of experience and extensive know-how with regard to design and implementation were essential for this high precision power supply version. Together with a carefully selected group of certified suppliers, we select high precision components for the PNChp product line. To calibrate and test the power supplies, dedicated measuring means and calibrated test equipment is used. Of course, this equipment is continuously inspected and the calibration is checked regularly.

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Technical data

General

Function	switch mode power supply
Input voltage	1-phase units: 230V ±10 %
3-phase units:	400V ±10 %
	other on request
Input frequency	47 ... 63Hz
Input current	type-dependent
Ambient temp.	0°C ... 40°C

Displays

Output voltage	3,5-digit digital display
Output current	3,5-digit digital display
Voltage control (CV-mode)	LED
Current control (CC-mode)	LED
HV-ON	signal lamp

Output

Discharge time (with unloaded output)	<60s (type-dependent)
Output voltage	positive or negative (reversal polarity as option) electronic common connected to earth
Output socket	Heinzinger HV-socket, passed through to the output voltage

Analog Interface for remote control included

Voltage adjustment	0...10V
Current adjustment	0...10V
Voltage monitor	0...10V
Current monitor	0...10V
Output on/off	contact NO = on
Connector	15-pin Sub-D-socket

Full set of device IDs including default set

Enclosure

Universal enclosure for use as 19“-chassis or as bench case version (12U units as 19“-rack)
Width 19“(443mm), height & depth type dependent
Customized versions (e.g. 2U) on request

Voltage stabilization

Setting range approx.:	0.5 % to 100 % U_{nom}
Setting accuracy: (manual operation)	≤0.02 % U_{nom}
Reproducibility:	≤0.1 % U_{nom}
Line regulation: (at ±10 % mains voltage change)	<±0.01 % U_{nom}
Load regulation: (on load step from 0 to 100 %)	≤0.05 % U_{nom}
Response time: (on load current change from 0 to 100 %)	<5ms to 0.1 % U_{nom} deviation
Stability: (under constant conditions)	≤0.001 % U_{nom} over 8h
Temperature coefficient:	≤0.001 % U_{nom} /K
Ripple:	≤0.001 % pp U_{nom} ±50mV

Current stabilization

Setting range approx.:	0.5 % to 100 % I_{nom}
Setting accuracy: (manual operation)	≤0.02 % I_{nom}
Reproducibility:	≤0.1 % I_{nom}
Line regulation: (at ±10 % mains voltage change)	<±0.01 % I_{nom}
Load regulation: (on output voltage change of around ±10 % due to load change)	<0.1 % I_{nom}
Response time: (on output voltage change of around ±10 % due to load change)	<5ms
Stability: (under constant conditions)	≤0.05 % I_{nom} over 8h
Temperature coefficient:	≤0.01 % I_{nom} /K
Ripple:	≤0.02 % pp Inom ±500µA

Scope of supply

- Heinzinger PNC unit according to type de scription
- Heinzinger HV-cable with HV-connector, length 3m
- 19“ rack adapter set (units up to 9U)
- Power cable 1.5m, with connector (CEE7, Schuko)
- Plug for analog interface
- User manual (German/English)

Options + Interfaces

For customization, a wide range of options and interfaces are available.

Heinzinger electronic GmbH
Anton-Jakob-Str. 4
83026 Rosenheim
Germany
Phone: +49 8031 2458 0
Fax: +49 08031 2458 58
Email: info@heinzinger.de
Web: www.heinzinger.com

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