HEINZINGER
HIGH VOLTAGE – SMART SOLUTIONS

PTNhp HIGH CURRENT POWER SUPPLY

Output currents up to 200 A

Linear regulated Power Supplies with Ultra High Precision

Ideal for use as magnet power supplies or applications in EMC sensitive environment

The ultra high-precision high current power supplies of the Heinzinger PTNhp series have the same characteristics as the units of the PTN series, but with even further improved accuracy and lower ripple. Even as standard, they offer ripple and stability in the range of <0.001%, with a temperature coefficient also in this range.

The power supplies of the PTNhp series are suitable for all applications for which the units of the PTN and PTN3p series are also used. However, the requirements from users and applications can be even higher for the PTNhp devices.

Absolute reproducibility, DC voltages comparable to a battery and the highest quality requirements in manufacturing enable the implementation of complex development and research tasks in various fields of technology and research.

For most versions of the PTN and PTN3p series, Heinzinger also offers the PTNhp series. The ultra high accuracy class is not dependent on the power of the power supply. Different solutions can be implemented depending on application, load type or environment. We would be pleased to provide you with an offer for the power supply that is optimally suited to your application.

PTNhp-Series

Highlights

- Lowest ripple and highest stability <0.001 %
- Output voltage up to 600 V
- Output current up to 200 A
- Ultra-fast recovery times
- Sense input line for volta ge control at the load face 0...10 V
- Continous short circuit proof
- Benchtop or 19“ rack mount

Typical Applications

Semiconductor tests

Magnet supply

Fuse tests

Equipment tests

Lamp supply

PTNhp HIGH CURRENT POWER SUPPLY

Technical Data

General

Function	high precision double stabilised linear controlled power supply
Input voltage	1-phase units: 230 V ±10% 2-phase units: 400 V ±10% 3-phase units: 400 V ±10% other on request
Input frequency	47 ... 63 Hz
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

Output

Discharge time (without load)	<60 s (type-dependent)
Output voltage	isolated, floating w.r. to ground (≤1000 V DC) connected to output „+“
Output term.	sockets, passed through to the output current >65 V safety sockets

Analog Interface for remote control (standard for units <100 V)

Voltage adjustment	0...10 V
Current adjustment	0...10 V
Voltage monitor	0...10 V
Current monitor	0...10 V
Output on/off	contact NO = on
Connector	15-pin Sub-D-socket
Polarity	related to positive output (potential free as option)

Enclosure

See Heinzinger PTN and PTN3p series, for details ask our Heinzinger sales team

Voltage stabilization

Setting range	approx. 0.1 % to 100 % U_{nom}
Setting accuracy (manual operation)	±0.02 % U_{nom}
Line regulation (at ±10% mains voltage change due to load change)	<±0.001 % U_{nom}
Load regulation (on load step from 10% to 90%)	≤±0.001 % U_{nom} ±200 µV
Response time (on load current change from 10% to 90%)	<5 ms to 0.1 % U_{nom} deviation (type-dependent)
Stability (under constant conditions)	≤0.001 % U_{nom} over 8 h
Temperature coefficient	≤0.001 % U_{nom} /K
Ripple	≤0.001 % ss ±200 µV U_{nom}

Current stabilization

Setting range	approx. 0.1 % to 100 % I_{nom}
Setting accuracy (manual operation)	±0.02 % I_{nom}
Line regulation (at ±10% mains voltage change due to load change)	<±0.003 % I_{nom} ±200 µA
Load regulation (on output voltage change of around ±10% due to load change)	<±0.005 % I_{nom} ±100 µA
Response time (on output voltage change of around ±10% due to load change)	<5 ms to 0.1 % I_{nom} deviation (type-dependent)
Stability (under constant conditions)	≤0.002 % I_{nom} over 8 h
Temperature coefficient:	≤0.002 % I_{nom} /K
Ripple	≤0.005 % pp ±1 mA I_{nom}

Scope of supply

- Heinzinger PTN unit according to type description
- Plug for analog interface
- User manual (German/English)

04/2024

Accessories / Options:

- Option 01, all outputs on the rear side
- Option 02, interlock connection
- Option 03, analog displays
- Option 04, 4 1/2-digit digital displays
- Option 10, DC isolation of the analog interface
- Option 22, coarse/fine setup control
- Option 40, simulation of battery characteristics
- Option 41, power control
- Option 46, ramp control
- Further connecting cables for special applications are available on request
- Option 76, digital 16-bit interface
- Option 95, calibration certificate

Product Summary PTNhp

Type	Voltage (V DC)	Current (A)	Height (U)	Rack Depth (mm)	Weight (kg)
PTNhp 6 - 20	0 ... 6	0 ... 20	4	520	20
PTNhp 6 - 40		0 ... 40	5	620	40
PTNhp 6 - 100		0 ... 100	9	620	75
PTNhp 6 - 200 2p		0 ... 200	12	620	100
PTNhp 16 - 10	0 ... 16	0 ... 10	4	520	20
PTNhp 16 - 20		0 ... 20	4	520	35
PTNhp 16 - 40		0 ... 40	5	620	45
PTNhp 16 - 60		0 ... 60	5	620	55
PTNhp 16 - 80		0 ... 80	9	620	75
PTNhp 16 - 100 2p		0 ... 100	9	620	80
PTNhp 16 - 200 2p		0 ... 200	12	620	140
PTNhp 32 - 5	0 ... 32	0 ... 5	4	520	21
PTNhp 32 - 10		0 ... 10	4	520	25
PTNhp 32 - 20		0 ... 20	4	520	27
PTNhp 32 - 40		0 ... 40	5	620	47
PTNhp 32 - 60 2p		0 ... 60	5	620	55
PTNhp 32 - 80 2p		0 ... 80	9	620	80
PTNhp 32 - 100 2p		0 ... 100	9	620	110
PTNhp 65 - 2	0 ... 65	0 ... 2	4	520	20
PTNhp 65 - 5		0 ... 5	4	520	30
PTNhp 65 - 10		0 ... 10	4	520	30
PTNhp 65 - 20		0 ... 20	4	520	40
PTNhp 65 - 40 2p		0 ... 40	6	620	70
PTNhp 65 - 60 2p		0 ... 60	9	620	100
PTNhp 65 - 80 2p		0 ... 80	9	620	140
PTNhp 125 - 1	0 ... 125	0 ... 1	4	520	15
PTNhp 125 - 2		0 ... 2	4	520	20
PTNhp 125 - 5		0 ... 5	4	520	20
PTNhp 125 - 10		0 ... 10	4	520	42
PTNhp 125 - 20 2p		0 ... 20	6	620	80
PTNhp 125 - 40 2p		0 ... 40	9	620	120
PTNhp 250 - 1	0 ... 250	0 ... 1	4	520	21
PTNhp 250 - 2		0 ... 2	4	520	23
PTNhp 250 - 5		0 ... 5	4	520	40
PTNhp 250 - 10 2p		0 ... 10	6	620	80
PTNhp 250 - 20 2p		0 ... 20	9	620	140
PTNhp 350 - 1	0 ... 350	0 ... 1	4	520	20
PTNhp 350 - 2		0 ... 2	4	520	22
PTNhp 350 - 5		0 ... 5	5	620	50
PTNhp 350 - 10 2p		0 ... 10	5	620	76
PTNhp 600 - 1	0 ... 600	0 ... 1	4	520	25
PTNhp 600 - 2		0 ... 2	5	620	50
PTNhp 600 - 5 2p		0 ... 5	5	620	75

2p = mains connection 2-phase
1U = 44.45 mm
Different voltage- or current combinations are available on request.
Dimensions and weights are approximations and may vary depending on the version configurations