

PTN HIGH CURRENT POWER SUPPLY

Output currents up to 200 A



Linear regulated Power Supplies with High Precision

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

Precision high current power supplies from the PTN series are double-stabilized, linear-regulated devices that supply a controlled DC voltage with very low ripple.

They are available in various current ratings up to a voltage class of 600 volts with power up to 5,200 Watts and meet the most demanding standards (higher voltages, and power on request). The PTN series offers standard currents up to 200 A (>5,000 A available with PTN3p) with an accuracy of <0.01 %.

The units of the PTN series have proven themselves especially in demanding industrial environments, where they are often used in 24-hour continuous operation.

Due to their excellent long-term stability and reproducibility, they meet high quality standards over a long period of time in several different industry and research institutes.

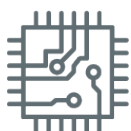
In addition, BNC offers a wide range of standard options for the PTN, which helps meeting complex requirements such as battery simulation with adjustable internal resistance.

Furthermore, the PTN can be adapted to specific requirements, making them an ideal foundation for a variety of applications in the high current range.

PTN-Series Highlights

- Low ripple and high stability through linear transistor control loop (PTNhp versions down to 0.001 %)
- Output voltage up to 600 V
- Output current up to 200 A
- Ultra-fast recovery times
- Sense input line for voltage control at the load face 0...10 V
- Continuous short circuit proof
- Benchtop or 19" rack mount

Typical Applications



Semiconductor tests



Magnet supply



Fuse tests



Equipment tests



Lamp supply

PTN HIGH CURRENT POWER SUPPLY

Technical Data

General

Function	double stabilised linear controlled power supply
Input voltage	1-phase units: 230 V $\pm 10\%$ 2-phase units: 400 V $\pm 10\%$ 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

Output

Discharge time (without load)	<60 s (type-dependent)
Output voltage	isolated, floating w.r. to ground ($\leq 1,000$ V DC) connected to output „+“ sockets, passed through to the output current >65 V safety sockets
Output term.	

Analog Interface for remote control

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

Universal enclosure for use as 19"-rack-mount or as benchtop version
 Width 19"(443 mm), height & depth type dependent

Voltage stabilization

Setting range	approx. 0.1 % to 100 % U_{nom}
Setting accuracy (manual operation)	$\pm 0.02\%$ U_{nom}
Line regulation (at $\pm 10\%$ mains voltage change due to load change)	$< \pm 0.001\%$ U_{nom}
Load regulation (on load step from 10% to 90%)	$\leq \pm 0.01\%$ $U_{nom} \pm 200 \mu V$
Response time (on load current change from 10% to 90%)	<5 ms to 0.1 % U_{nom} deviation (type-dependent)
Stability (under constant conditions)	$\leq 0.01\%$ U_{nom} over 8 h
Temperature coefficient	$\leq 0,01\%$ U_{nom} / K
Ripple	$\leq 0,01\%$ pp ± 1 mV U_{nom}

Current stabilization

Setting range	approx. 0.1 % to 100 % I_{nom}
Setting accuracy (manual operation)	$\leq 0.02\%$ I_{nom}
Line regulation (at $\pm 10\%$ mains voltage change due to load change)	$< \pm 0.003\%$ $I_{nom} \pm 200 \mu A$
Load regulation (on output voltage change of around $\pm 10\%$ due to load change)	$< 0.01\%$ $I_{nom} \pm 100 \mu A$
Response time (on output voltage change of around $\pm 10\%$ due to load change)	<5 ms to 0.1 % I_{nom} deviation (type-dependent)
Stability (under constant conditions)	$\leq 0.02\%$ I_{nom} over 8 h
Temperature coefficient:	$\leq 0.02\%$ I_{nom} / K
Ripple	$\leq 0.05\%$ pp ± 1 mA I_{nom}

Scope of supply

- BNC PTN unit according to type description
- 19" rack adapter set
- Power cable 1.5 m, 1 phase units with connector(CEE7), 2 phase units without connector
- Plug for analog interface
- User manual

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 72, digital 12-bit interface
- Option 95, calibration certificate

Product Summary PTN

Type	Voltage (V DC)	Current (A)	Height (U)	Rack Depth (mm)	Weight (kg)	Part number
PTN 6 - 20	0 ... 6	0 ... 20	4	520	20	00.220.200.1
PTN 6 - 40		0 ... 40	5	620	40	00.220.201.1
PTN 6 - 100		0 ... 100	9	620	75	00.220.202.1
PTN 6 - 200 2p		0 ... 200	12	620	100	00.220.203.1
PTN 16 - 10	0 ... 16	0 ... 10	4	520	20	00.220.204.1
PTN 16 - 20		0 ... 20	4	520	35	00.220.205.1
PTN 16 - 40		0 ... 40	5	620	45	00.220.206.1
PTN 16 - 60		0 ... 60	5	620	55	00.220.207.1
PTN 16 - 80		0 ... 80	9	620	75	00.220.208.1
PTN 16 - 100 2p		0 ... 100	9	620	80	00.220.209.1
PTN 16 - 200 2p		0 ... 200	12	620	140	00.220.210.1
PTN 32 - 5		0 ... 32	0 ... 5	4	520	21
PTN 32 - 10	0 ... 10		4	520	25	00.220.212.1
PTN 32 - 20	0 ... 20		4	520	27	00.220.213.1
PTN 32 - 40	0 ... 40		5	620	47	00.220.214.1
PTN 32 - 60 2p	0 ... 60		5	620	55	00.220.215.1
PTN 32 - 80 2p	0 ... 80		9	620	80	00.220.216.1
PTN 32 - 100 2p	0 ... 100		9	620	110	00.220.217.1
PTN 65 - 2	0 ... 65	0 ... 2	4	520	20	00.220.218.1
PTN 65 - 5		0 ... 5	4	520	30	00.220.219.1
PTN 65 - 10		0 ... 10	4	520	30	00.220.220.1
PTN 65 - 20		0 ... 20	4	520	40	00.220.221.1
PTN 65 - 40 2p		0 ... 40	6	620	70	00.220.222.1
PTN 65 - 60 2p		0 ... 60	9	620	100	00.220.223.1
PTN 65 - 80 2p		0 ... 80	9	620	140	00.220.224.1
PTN 125 - 1	0 ... 125	0 ... 1	4	520	15	00.220.225.1
PTN 125 - 2		0 ... 2	4	520	20	00.220.226.1
PTN 125 - 5		0 ... 5	4	520	20	00.220.227.1
PTN 125 - 10		0 ... 10	4	520	42	00.220.228.1
PTN 125 - 20 2p		0 ... 20	6	620	80	00.220.229.1
PTN 125 - 40 2p		0 ... 40	9	620	120	00.220.230.1
PTN 250 - 1	0 ... 250	0 ... 1	4	520	21	00.220.231.1
PTN 250 - 2		0 ... 2	4	520	23	00.220.232.1
PTN 250 - 5		0 ... 5	4	520	40	00.220.233.1
PTN 250 - 10 2p		0 ... 10	6	620	80	00.220.234.1
PTN 250 - 20 2p		0 ... 20	9	620	140	00.220.235.1
PTN 350 - 1	0 ... 350	0 ... 1	4	520	20	00.220.236.1
PTN 350 - 2		0 ... 2	4	520	22	00.220.237.1
PTN 350 - 5		0 ... 5	5	620	50	00.220.238.1
PTN 350 - 10 2p		0 ... 10	5	620	76	00.220.239.1
PTN 600 - 1	0 ... 600	0 ... 1	4	520	25	00.220.240.1
PTN 600 - 2		0 ... 2	5	620	50	00.220.241.1
PTN 600 - 5 2p		0 ... 5	5	620	75	00.220.242.1

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

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