

LNCE HIGH VOLTAGE POWER SUPPLY

Output Voltage up to 20,000 Volts



High Voltage Cassette Power Supplies up to 20,000 Volts

Modules up to 20,000 Volts, as DC/DC power supplies

The LNCE series high voltage modules are ideal for applications that require a reliable high voltage power supply of up to 30 Watts thanks to their compact size and robust design. They operate as primary switched DC/DC converters with an input voltage of 24 Volts and can be controlled via a 0...10 V analog interface.

These supplies are used in quality assurance and high-voltage tests as well as electrostatic applications. The various control and readout options via the analog interface allow easy adaptation to the specific application.

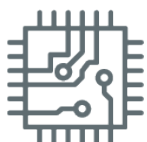
Heinzinger LNCE modules come in various performance classes with a voltage range of up to 20,000 Volts, and can be supplied with either positive or negative polarity.

For units with more than 10 kV, the high voltage part is sealed to ensure the best possible long-term stability and compact dimensions. The LNCE is built as 19" cassettes, however customized variants without housing are available on request.

LNCE-Series Highlights

- Output voltages up to 20,000 V
- Output power up to 30 W
- Input voltage 24 V DC
- 19" cartridge, 3U, 14 slots
- Low residual ripple, up to 100 ppm
- Continuous short circuit proof
- Automatic transition from voltage to current source mode
- Remote controllable via integrated analog interface 0...10 V

Typical Applications



Semiconductor tests / manufacturing



HV tests



Quality tests



Equipment tests



Electrostatic applications

LNCE HIGH VOLTAGE POWER SUPPLY

Technical Data

General

Function	switch mode DC/DC power supply
Input voltage	24 V DC $\pm 10\%$
Input current	type-dependent (max. 2.5 A)
Ambient temp.	0 °C ... 40 °C

Output

Discharge time (without load)	<10 s (type-dependent)
Output voltage	positive or negative connected to earth
Output socket	Heinzinger HV cable 0.5 m

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
Voltage control (CV-mode)	signal
Current control (CC-mode)	signal
Output on/off	contact NO = on
Connector	multipoint connector 24+7 pol. (DIN 41612)

Enclosure

3U cassette, depth 169 mm, width 14 HP (= 70.8 mm),
weight approx. 0.9 kg

Scope of supply

- Heinzinger LNCE unit according to type description
- Plug for multipoint connector
- User manual (German/English)

Voltage stabilization

Setting range	approx. 1 % to 100 % U_{nom}
Setting accuracy	$\leq 0.1\%$ U_{nom}
Line regulation (at $\pm 10\%$ mains voltage change due to load change)	$< 0.01\%$ U_{nom}
Load regulation (on load step from 0 to 100%)	$\leq 0.05\%$ U_{nom}
Response time (on load current change from 0 to 100%)	≤ 100 ms
Stability (under constant conditions)	$\leq 0.05\%$ U_{nom} over 8h
Temperature coefficient	$\leq 0.1\%$ U_{nom} / K
Ripple (output voltage < 3 kV)	$\leq 0.1\%$ pp U_{nom}
Ripple (output voltage ≥ 3 kV)	$\leq 0.05\%$ pp U_{nom}

Current stabilization

Setting range	approx. 1 % to 100 % I_{nom}
Setting accuracy	$\leq 0.1\%$ I_{nom}
Line regulation (at $\pm 10\%$ mains voltage change due to load change)	$< \pm 0.01\%$ I_{nom}
Load regulation (on output voltage change of around $\pm 10\%$ due to load change)	$< 0.05\%$ I_{nom}
Response time (on output voltage change of around $\pm 10\%$ due to load change)	≤ 100 ms
Stability (under constant conditions)	$\leq 0.05\%$ I_{nom} over 8h
Temperature coefficient	$\leq 0.05\%$ I_{nom} / K
Ripple (output voltage < 3 kV)	$\leq 0.1\%$ pp I_{nom}
Ripple (output voltage ≥ 3 kV)	$\leq 0.05\%$ pp I_{nom}

Product Summary LNCE

Type	Voltage (V DC)	Current (mA)	Power (W)	Height (U)	Rack Depth (mm)	Width (TE)	Part number*
LNCE 300 - 10	0 ... 300	0 ... 10	3	3	169	14	00.220.630.x
LNCE 300 - 100		0 ... 100	30	3	169	14	00.220.631.x
LNCE 600 - 5	0 ... 600	0 ... 5	3	3	169	14	00.220.632.x
LNCE 600 - 50		0 ... 50	30	3	169	14	00.220.633.x
LNCE 1500 - 2	0 ... 1,500	0 ... 2	3	3	169	14	00.220.634.x
LNCE 1500 - 20		0 ... 20	30	3	169	14	00.220.635.x
LNCE 3000 - 1	0 ... 3,000	0 ... 1	3	3	169	14	00.220.636.x
LNCE 3000 - 10		0 ... 10	30	3	169	14	00.220.637.x
LNCE 6000 - 1	0 ... 6,000	0 ... 1	6	3	169	14	00.220.638.x
LNCE 6000 - 5		0 ... 5	30	3	169	14	00.220.639.x
LNCE 10000 - 05	0 ... 10,000	0 ... 05	5	3	169	14	00.220.640.x
LNCE 10000 - 3		0 ... 3	30	3	169	14	00.220.641.x
LNCE 20000 - 02	0 ... 20,000	0 ... 02	4	3	169	14	00.220.642.x
LNCE 20000 - 1		0 ... 1	20	3	169	14	00.220.643.x

*All devices are available with positive x = 1 or negative x = 9 polarity

Other High Voltage Power Supplies

NCE - High Voltage Power Supplies



The Heinzinger NCE high voltage cassettes provide high voltage up to 30,000 Volts as a primary switched mode power supply, depending on the type and design, in a current range between 1 and 600 mA.

Features

- Voltage up to 30,000 Volts
- Output power up to 30 and 60 Watts
- Output current up to 600 mA
- Input voltage 24 V DC
- 19" cartridge, 3U
- Low ripple
- Continuous short circuit proof
- Automatic transition from voltage to current source mode
- Remote controllable and extendable via integrated analog interface, for voltage and current setup as well as acknowledgement



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