BNC SCIENTIFIC
A Berkeley Nucleonics Division

EVO

High Voltage up to 10kV DC

EVO Series
Highlights

- Voltage classes:
  0 ... 1,5 kV DC
  0 ... 5 kV DC
  0 ... 10 kV DC
- Power: 3kW or 2kW
- Currents from 0.2 to 2 A
- Fully digital regulation
- Usable as 19“ or desktop chassis, with integrated adapter
- Compact (11.5 kg), 2U
- Widerange AC input, singlephase
- Ethernet and RS232 on board
- SCPI command set
- Predictive fan control
- Output polarity reversible, electrically
- Ramp control (Option)
- Arc detection (Option)

High Voltage Power Supplies of the EVO Series are the New Generation of DC Power Supplies

Simple handling is combined with speed and high precision.

The new high voltage power supplies of the EVO series offer quick control at high precision. They are particularly comfortable to operate. Their compact build needs only 2U, which is extraordinary for their power density of 2kW and 3kW. A microcontroller, combined with an FPGA (Field Programmable Gate Array) permits particularly precise control. This makes complete and digital control of the EVO power supplies possible. FPGAs are used in high voltage power supplies since they permit quick signal processing and flexible adaptation to various load requirements. Supplies of the EVO series are optimal for many different user demands.

High performance without losing any speed or control precision characterizes the EVO high voltage power supplies. The polarity of the high voltage output can be electrically reversed depending on whether a positive or a negative high voltage is needed.

EVO power supplies have been designed to be suitable for various applications. Our customer use it e.g. for various kind of HV tests, in semiconductor production and verification, at manufacturing of photovoltaic cells and components, for end of line calibration processes, or in basic research and development.

EVO
High Voltage up to 10kV DC

EVO Series
Technical data

Function
Digitally regulated DC high voltage power supply

Security
In addition to external interlock and analogue control signals, there is over voltage and over current protection. These features protect the user, the device and your load.

AC Input
230V ±10 % (3kW version)
187V - 253V (2kW version) 47Hz - 63Hz
Active power factor correction
Mains socket on rear side (IEC 60320 Type C20)

Human Machine Interface
- Colored 3.5“ TFT screen with LED backlight
- Input by 2 soft keys and one turn/press button
- Menu navigation by clear structure and sub menus
- Configurable code protection for sub menus
- Error and event monitoring including time tags (actual and shadow)

DC Output
Positive, negative or reversible polarity
HV connector: Female Heinzinger HV connector on rear side

Precision
Overall accuracy class of 0.01 % (100ppm)

Typical values (for v/c)

Setting accuracy:	16bit
Setting range:	0.01% - 100% U_{nom}
Reproducibility:	0.1 % U_{nom}
Line regulation (±10 %):	±0.01 % U_{nom}
Ripple:	0.01 % pp U_{nom} ± 100mV
Load regulation: (10 % - 90 %)	0.05 % U_{nom}
Response time on changes:	1ms to 0.1 % U_{nom}
Stability:	0.01 % U_{nom} per 8h
Temperature coefficient:	0.01 % U_{nom}/K
Interfaces: SCPI command set	RS232, Ethernet (USB service port)
I/O terminal:	Interlock, configurable I/Os

Enclosure
19“ and/or desktop, height: 2U (89mm),
depth: 500mm,
steel chassis, RAL 9005,
weight: approx. 11.5 kg

Scope of delivery
Heinzinger EVO HV power supply
Male Heinzinger HV plug with 3m HV cable
Rubber feet for desktop application
Mains cord 1.5m, with connector Schuko (CEE7) on grid and terminal block for I/O plug

modell	power(W)	max. voltage (V)	max. current (A)
EVO 1500 - 1400	2000	1500	1.4
EVO 5000 - 400		5000	0.4
EVO 10000 - 200		10000	0.2
EVO 1500 - 2000	3000	1500	2
EVO 5000 - 600		5000	0.6
EVO 10000 - 300		10000	0.3

Polarity: positive, negative or reversible

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