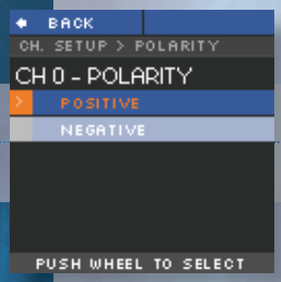
iseg
HIGH VOLTAGE. EXACTLY.

2017 NEW PRODUCT

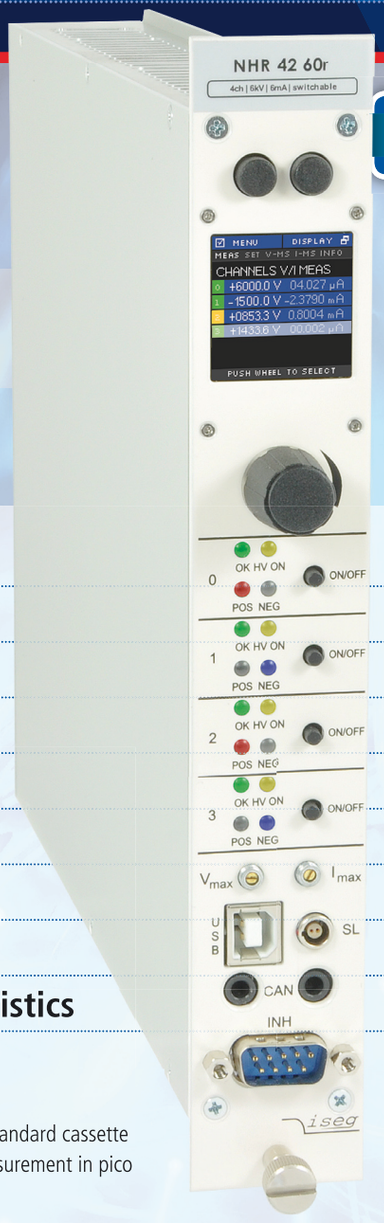
NHR

EXCLUSIVE: ELECTRONICALLY SWITCHABLE POLARITY



CHANGE POLARITY IN 4 STEPS

Simple, efficient, 100 % safe



NIM

ULN

CFG

VCT

L

DIO

SYSTEMS

- 4 channels, electronically switchable polarity
- 2 kV / 6 kV versions
- very low ripple and noise
- 6 kV with switchable modes:
  up to 2 kV / 4 mA, 4 kV / 3 mA or 6 kV / 2mA
- Front panel control with 1,44“ TFT display
- New control software
- USB, CAN interfaces
- Benchmark setting ripple and noise characteristics

The iseg NHR modules are multi-channel high voltage power supplies in 1/12 NIM standard cassette format. The iseg technology combines ultra precise high voltage generation and measurement in pico amp range.

The NHR series provides up to 4 channels, each with an independent voltage and current control and electronically reversible polarity. The 6kV channel provides a maximum of versatility: with three electronically switchable HV-generation modes it can supply 4 mA up to voltages of 2 kV, 3 mA up to 4 kV or 2 mA up to 6 kV. Alternatively the NHR can be equipped with cost efficient 2 kV / 6 mA channels with one HV output mode.

Several NHR modules can be daisy-chained by CAN and controlled with a single USB connection or by optional iseg iCS system via Ethernet. The module is made of best components such as 24 bit ADC and 20 bit DAC, an excellent front panel control with TFT display plus comprehensive security features.

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HIGH VOLTAGE. EXACTLY.

NHR

EXCLUSIVE: ELECTRONICALLY SWITCHABLE POLARITY

CHANGE POLARITY IN 4 SIMPLE STEPS:



Select „Channel setup"



Setup each channel individually



Select „Polarity"



Select preferred polarity

SPECIFICATIONS / SPEZIFIKATION

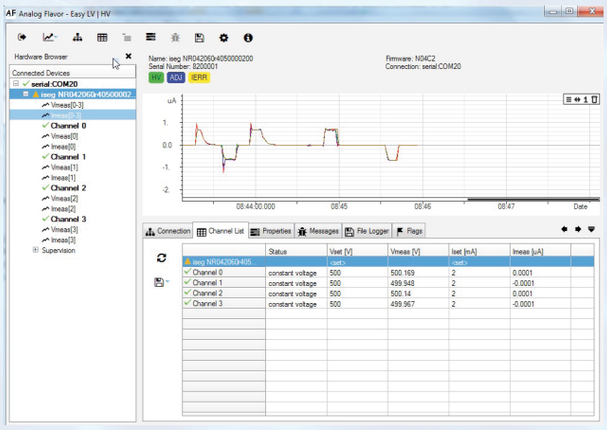
	NHR STANDARD	NHR HIGH PRECISION
Polarity	electronically switchable	
Ripple and noise	< 10 mV	< 2-3 mV
Temperature coefficient	50 ppm / K	30 ppm/K | opt. 10 ppm/K (TC)
Resolution voltage setting	$2 \cdot 10^{-6} \cdot V_{nom}$	
Resolution current setting	$2 \cdot 10^{-6} \cdot I_{nom}$	
Resolution voltage measurement	$2 \cdot 10^{-6} \cdot V_{nom}$	$1 \cdot 10^{-6} \cdot V_{nom}$
Resolution current measurement - full range	$2 \cdot 10^{-6} \cdot I_{nom}$	$1 \cdot 10^{-6} \cdot I_{nom}$
Resolution current measurement - 2nd range	n/a	50 pA [I_{out} < 20µA]
Accuracy voltage measurement *	± (0.01 % • V_{out} + 0.02 % • V_{nom})	± (0.01 % • V_{out} + 0.01 % • V_{nom})
Accuracy current measurement *- full range	± (0.01 % • I_{out} + 0.02 % • I_{nom})	± (0.01 % • I_{out} + 0.01 % • I_{nom})
Accuracy current measurement *- 2nd range	n/a	± (0.01 % • I_{out} + 4 nA)
Rate of voltage change	$1 \cdot 10^{-6} \cdot V_{nom}$/s up to 0.2 • V_{nom} / s | opt. up to 0.75 • V_{nom} / s	
HV connector	SHV	
Case	1/12 NIM cassette	
Protection	INHIBIT, Safety loop, short circuit, overload, hardware V/I limits	

*) **All specifications guaranteed from 1% · V_{nom} < V_{out} < V_{nom}**

CONFIGURATIONS / KONFIGURATIONEN

MODEL	CHANNELS	PRECISION	OUTPUT VOLTAGE	OUTPUT CURRENT	OUTPUT MODES
NHR 20 20	2	Standard	2000 V	6 mA	2 kV / 6 mA
NHR 20 60	2	Standard	6000 V	4 mA	6 kV / 2 mA | 4 kV / 3 mA | 2 kV / 4 mA
NHR 40 20	4	Standard	2000 V	6 mA	2 kV / 6 mA
NHR 40 60	4	Standard	6000 V	4 mA	6 kV / 2 mA | 4 kV / 3 mA | 2 kV / 4 mA
NHR 22 20	2	High	2000 V	6 mA	2 kV / 6 mA
NHR 22 60	2	High	6000 V	4 mA	6 kV / 2 mA | 4 kV / 3 mA | 2 kV / 4 mA
NHR 42 20	4	High	2000 V	6 mA	2 kV / 6 mA
NHR 42 60	4	High	6000 V	4 mA	6 kV / 2 mA | 4 kV / 3 mA | 2 kV / 4 mA

Other configurations on request! Andere Konfigurationen auf Anfrage.



Take advantage of quick access with the new Control Software:

- for Linux / Windows / Mac
- instant access
- graphical plots with export
- logging and data export
- hardware configuration
- many more new features

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iseg is a manufacturer of very precise and stable High Voltage Power Supplies with focus on physics and industrial applications. The product portfolio includes AC/ DC, DC/DC and modular High Voltage systems. The company was founded in 1995. Continuous growth and innovation strengthened the company´s market position. **iseg** is well known for the delevopment of outstanding custom specific solutions for various special applications.

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