

NIM

# NHQ

## SINGLE/DUAL CHANNEL HV MODULE IN NIM STANDARD

- ▶ 1 / 2 channels, 2 / 3 / 4 / 5 / 6 / 8 / 10 kV and customized versions
- ▶ LCD for voltage and current display
- ▶ Switchable polarity
- ▶ Low ripple and noise
- ▶ Front panel control with high precise 10-turn potentiometers
- ▶ Hardware voltage and current limits with 10 % step
- ▶ RS232, analog I/O, CAN (optional)
- ▶ Programmable parameters (current trip, ramp speed etc.)



### SPECIFICATIONS

	NHQ STANDARD	NHQ LOW COST
Polarity	switchable	switchable
Ripple and noise	< 2   5   50 mV <sub>p-p</sub>	< 50 mV <sub>p-p</sub>
Stability	< 5 • 10 <sup>-5</sup> • V <sub>nom</sub>	< 2 • 10 <sup>-4</sup> • V <sub>nom</sub>
Temperature coefficient	< 50 ppm / K	< 100 ppm / K
Resolution voltage setting	1 V	1 V
Resolution voltage measurement - display	1 V	1 V
Resolution voltage measurement - remote	1 V	n/a
Resolution current measurement - display	1 µA	1 µA
with options	L: 100 nA [I <sub>nom</sub> = 100 µA]	L: 100 nA [I <sub>out</sub> < 100 µA]
Resolution current measurement - remote	1µA	-
with options	L: 100 nA [I <sub>nom</sub> = 100 µA]	n/a
Accuracy voltage measurement *	± (0.05 % • V <sub>out</sub> + 0.02 % • V <sub>nom</sub> + 1 digit)	± (0.05 % • V <sub>out</sub> + 0.02 % • V <sub>nom</sub> + 1 digit)
Accuracy current measurement *	± (0.05 % • I <sub>out</sub> + 0.02 % • I <sub>nom</sub> + 1 digit)	± (0.05% • I <sub>out</sub> + 0.05% • I <sub>nom</sub> + 1 digit)
Voltage ramp - hardware	500 V / s	500 V / s
Voltage ramp - software	2 - 255 V / s	n/a
Protection	INHIBIT, hardware V/I limits (10%steps)	INHIBIT, hardware V/I limits (10%steps)
HV connector	SHV   LEMO	SHV   LEMO
Case	1/12 HP NIM cassette	1/12 HP NIM cassette

\*All specifications guaranteed from 1% • V<sub>nom</sub> < V<sub>out</sub> < V<sub>nom</sub>

### OPTIONS & ORDER INFO

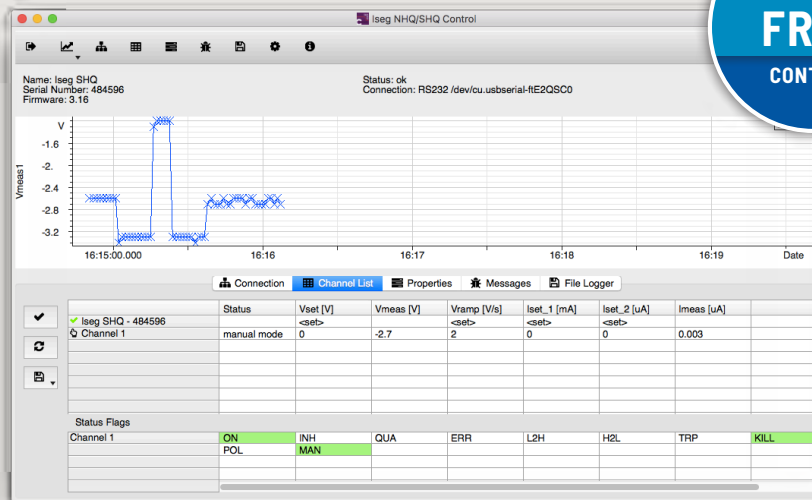
OPTION	ORDER INFO	EXAMPLE
CHANNELS	1 channel version: <b>n = 1</b> , 2 channel version: <b>n = 2</b>	NHQ 202M
POLARITY	positive: <b>x = p</b> , negative: <b>x = n</b>	NHQ 1010p
±24 V SUPPLY ONLY	<b>±24 V = N24</b>	
VERY HIGH VOLTAGE RESOLUTION 10mV	<b>VHR</b>	
LOWER OUTPUT CURRENT	<b>104 (100 µA)</b>	

NIM

SYSTEMS

# NHQ

## SINGLE/DUAL CHANNEL HV MODULE IN NIM STANDARD



The established NHQ single/dual channel HV module is cased in compact 1/12 NIM format. The NHQ series HV supplies are front panel controllable with a precise 10-turn potentiometer per channel for voltage setting and a common LCD for display of voltage or current. For remote control the NHQ comes with RS232, analog I/O or optional CAN-interface. The voltage ramp is hardware fixed and can be changed in remote operation. The high voltage output is short circuit and overload protected, the INHIBIT function over external digital signal triggers the HV switch-off.

### CONFIGURATIONS

MODEL	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE AND NOISE	INTERFACE	CONNECTOR
<b>NHQ STANDARD</b>					
NHQ n02M	2 kV	6 mA	2 mV <sub>p-p</sub>	RS232	SHV
NHQ n03M	3 kV	4 mA	2 mV <sub>p-p</sub>	RS232	SHV
NHQ n04M	4 kV	3 mA	2 mV <sub>p-p</sub>	RS232	SHV
NHQ n05M	5 kV	2 mA	5 mV <sub>p-p</sub>	RS232	SHV
NHQ n06L	6 kV	1 mA	5 mV <sub>p-p</sub>	RS232	SHV
NHQ n32M	2 kV	6 mA	2 mV <sub>p-p</sub>	CAN	SHV
NHQ n33M	3 kV	4 mA	2 mV <sub>p-p</sub>	CAN	SHV
NHQ n34M	4 kV	3 mA	2 mV <sub>p-p</sub>	CAN	SHV
NHQ n35M	5 kV	2 mA	5 mV <sub>p-p</sub>	CAN	SHV
NHQ n36L	6 kV	1 mA	5 mV <sub>p-p</sub>	CAN	SHV
<b>NHQ LOW COST</b>					
NHQ n12M	2 kV	6 mA	50 mV <sub>p-p</sub>	AIO	SHV
NHQ n13M	3 kV	4 mA	50 mV <sub>p-p</sub>	AIO	SHV
NHQ n14M	4 kV	3 mA	50 mV <sub>p-p</sub>	AIO	SHV
NHQ n15M	5 kV	2 mA	50 mV <sub>p-p</sub>	AIO	SHV
NHQ n16L	6 kV	1 mA	50 mV <sub>p-p</sub>	AIO	SHV

Other configurations on request!