

# SHQ

DIGITALLY CONTROLLABLE HIGH PRECISION AC/DC DESKTOP HIGH VOLTAGE SUPPLY

Out: 2 kV - 6 kV | 12 W | Ch: 1/2 | Ripple: typ. < 2 -5 mV<sub>P-P</sub>



AC/DC

DIO

VLN

- ▶ 2 - 6 kV / 1 and 2 channel versions
- ▶ 2 line display for voltage and current
- ▶ switchable polarity
- ▶ high precision / very low ripple and noise
- ▶ high resolution: 1nA (opt. 100pA)/100mV (optionally 10mV)
- ▶ programmable voltage ramp

The SHQ series represents standalone High Precision laboratory HV power supplies. With two digital interface configurations CAN and RS232 the device can be controlled by a PC.

In a CAN configuration several SHQ devices can be controlled simultaneously or the SHQ can be integrated into experiments or industrial applications. The voltage ramp is hardware fixed and can be changed in remote operation mode. For even better current resolution the SHQ can be ordered with option „On1“.

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SHQ desktop high voltage power supply 1 / 2 channel versions

### SPECIFICATIONS / SPEZIFIKATION

<b>Polarity</b>	switchable
<b>Ripple and noise</b> ( $f > 10$ Hz)	$< 2 - 5 \text{ mV}_{p,p}$
<b>Stability</b> - $[\Delta V_{out} / \Delta V_{in}]$	$< 3 \cdot 10^{-5} \cdot V_{nom}$
<b>Stability</b> - $[\Delta V_{out} / \Delta R_{load}]$	$< 5 \cdot 10^{-5} \cdot V_{nom}$
<b>Temperatur coefficient</b>	$< 3 \cdot 10^{-5} / K$
<b>Resolution voltage measurement</b>	100 mV   opt. 10 mV [ $V_{nom} \leq 4 \text{ kV}$ ] (VHR)
<b>Resolution current measurement - full range</b>	100 nA
<b>Resolution current measurement - fine range</b>	1 nA [ $I_{out} < 100 \mu A$ ]   opt.: 100 pA [ $I_{out} < 10 \mu A$ ] (On1)
<b>Accuracy voltage</b> [one year]	$\pm (0.05 \% V_{out} + 0.02 \% \cdot V_{nom})$
<b>Accuracy current</b> [one year]	$\pm (0.01 \% I_{out} + 0.02 \% \cdot I_{nom})$
<b>Supply voltage</b>	100-240 VAC
<b>Protection</b>	hardware V/I limits, INHIBIT, programmable current trip
<b>Interfaces</b>	RS232   CAN
<b>HV connector</b>	SHV
<b>Case</b>	desktop case
<b>Dimensions</b> (L/W/H)	320/236/100 mm

### CONFIGURATIONS / KONFIGURATIONEN

MODEL	$V_{nom}$	$I_{nom}$	INTERFACE	RIPPLE AND NOISE
SHQ n22M	2 kV	6 mA	RS232	2 mV <sub>p,p</sub>
SHQ n42M	2 kV	6 mA	CAN	2 mV <sub>p,p</sub>
SHQ n24M	4 kV	3 mA	RS232	2 mV <sub>p,p</sub>
SHQ n44M	4 kV	3 mA	CAN	2 mV <sub>p,p</sub>
SHQ n26L	6 kV	1 mA	RS232	5 mV <sub>p,p</sub>
SHQ n46L	6 kV	1 mA	CAN	5 mV <sub>p,p</sub>

### ORDER & OPTIONS / BESTELLINFORMATIONEN

OPTION	ORDER INFO	EXAMPLE
<b>Channels</b>	1 channel version: <b>n = 1</b>	SHQ 122M
	2 channel version: <b>n = 2</b>	SHQ 222M
<b>VHR</b>	higher voltage resolution: 10 mV [ $V_{nom} \leq 4 \text{ kV}$ ]	
<b>On1</b>	higher current resolution in fine range $I_{meas} = 100 \text{ pA}$ [ $I_{out} < 10 \mu A$ ]	
<b>IWP</b>	current setting with ten turn potentiometer	

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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 development of outstanding custom specific solutions for various special applications.