iseg
HIGH VOLTAGE. EXACTLY.

SHR

SWITCHABLE HIGH PRECISION AC/DC DESKTOP HV SUPPLY

AC/DC

Out: **2 kV - 6 kV | 12 W per channel | Ch: 2/4 |** Ripple: **typ. < 2-3 mV_{P-P}**

ICS

DIO

VLN

- 2 / 4 channels, 2kV / 6kV versions
- electronically switchable polarity
- 6 kV channel with switchable modes: up to 2kV/4mA, 4kV/3mA or 6kV/2mA
- high precision / ultra low ripple and noise
- Ethernet / USB interfaces, integrated iCS on ARM Linux server hardware
- 4.3" TFT capacitive touch display
- comprehensive features like logging, diagrammatic display, script control

The new SHR series represents a standalone High Precision HV labratory SMU - Source Measuring Unit - equipped with the finest iseg HV generation technology and iCS control system. The SHR provides up to 4 HV-channels, each with independent voltage and current control and reversible polarity.
A completely new developed flexible 6kV channel provides a maximum 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 SHR can be equipped with cost efficient 2kV/6mA fixed channels. A high quality 4.3" TFT shows detailed information and can be controlled by capacitive touch.

All comprehensive features like logging, graphical display and customer specific plugins are also available by the precise jog-wheel and buttons.

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SHR

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SPECIFICATIONS / SPEZIFIKATION

	SHR STANDARD	SHR 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	$2 \bullet 10^{-6} \bullet V_{nom}$	
Resolution current setting	$2 \bullet 10^{-6} \bullet I_{nom}$	
Resolution voltage measurement	$2 \bullet 10^{-6} \bullet V_{nom}$	$1 \bullet 10^{-6} \bullet V_{nom}$
Resolution current measurement - full range	$2 \bullet 10^{-6} \bullet I_{nom}$	$1 \bullet 10^{-6} \bullet I_{nom}$
Resolution current measurement - 2nd range	n/a	50 pA [I_{out} < 20µA]
Accuracy voltage measurement *	$\pm$ (0.01 % $\bullet V_{out}$ + 0.02 % $\bullet V_{nom}$)	$\pm$ (0.01 % $\bullet V_{out}$ + 0.01 % $\bullet V_{nom}$)
Accuracy current measurement *- full range	$\pm$ (0.01 % $\bullet I_{out}$ + 0.02 % $\bullet I_{nom}$)	$\pm$ (0.01 % $\bullet I_{out}$ + 0.01 % $\bullet I_{nom}$)
Accuracy current measurement *- 2nd range	n/a	$\pm$ (0.01 % $\bullet I_{out}$ + 4 nA)
Rate of voltage change	$1 \bullet 10^{-6} \bullet V_{mode}$/s up to 0.2 $\bullet V_{mode}$ / s	
Supply voltage	100 - 240 VAC / 50-60 Hz	
Protection	INHIBIT, Safety loop, short circuit, overload, hardware V/I limits	
Interfaces	Ethernet, USB(A) 2.0 (Host: Wifi, Logging, Webcam), USB(B) (remote control)	
HV connector	SHV	
Case	desktop case	
Dimensions (L/W/H)	331/257/103 mm	

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

CONFIGURATIONS / KONFIGURATIONEN

MODEL	CHANNELS	PRECISION	OUTPUT VOLTAGE	OUTPUT CURRENT	HV-MODES (V_{mode} / I_{mode})
SHR 20 20	2	Standard	2 kV	6 mA	2 kV / 6 mA
SHR 20 60	2	Standard	6 kV	4 mA	6 kV / 2 mA | 4 kV / 3 mA | 2 kV / 4 mA
SHR 40 20	4	Standard	2 kV	6 mA	2 kV / 6 mA
SHR 40 60	4	Standard	6 kV	4 mA	6 kV / 2 mA | 4 kV / 3 mA | 2 kV / 4 mA
SHR 22 20	2	High	2 kV	6 mA	2 kV / 6 mA
SHR 22 60	2	High	6 kV	4 mA	6 kV / 2 mA | 4 kV / 3 mA | 2 kV / 4 mA
SHR 42 20	4	High	2 kV	6 mA	2 kV / 6 mA
SHR 42 60	4	High	6 kV	4 mA	6 kV / 2 mA | 4 kV / 3 mA | 2 kV / 4 mA

Other configurations on request! Andere Konfigurationen auf Anfrage.

ORDER & OPTIONS / BESTELLINFORMATIONEN

OPTION	ORDER INFO
LOWER TEMP. COEFFICIENT	**TC**
LOWER CURRENT (100 µA, high precision version only)	**L**
VOLTAGE CORRECTION BY TEMPERATURE	**VCT**
SINGLE CHANNEL INHIBIT - BNC CONNECTORS	**IHB**
DETECTOR INHIBIT (ORTEC, CANBERRA)	**IHD**

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 delevop-ment of outstanding custom specific solutions for various special applications.