

2kV/6mA - 6kV/2mA SWITCHABLE HIGH END HIGH PRECISION AC/DC DESKTOP HV SUPPLIES

FEATURES

- 2/4 Channels, 2kV/6kV Versions
- Electronically switchable polarity
- 6kV channel with electronically switchable modes:
up to 2kV/4mA, 4kV/3mA or 6kV/2mA
- High precision / very low ripple and noise
- Ethernet / USB interfaces, integrated iCS on ARM Linux server hardware
- 4.3" TFT capacitive touch display
- Logging, diagrammatic display, script control
- Made in Germany



The SHR series represents a standalone High Precision HV laboratory SMU - Source Measuring Unit - equipped with the finest High Voltage generation technology and iCS control system.

The SHR provides up to four 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 4mA up to voltages of 2kV, 3mA up to 4kV or 2mA up to 6kV. 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.

Max. Output Voltage	Max. Output Current	Channels	Model		HV Modes (V _{MODE} /I _{MODE})
			Standard Precision	High Precision	
2kV	6mA	2	SHR 20 20	SHR 22 20	2kV/6mA
2kV	6mA	4	SHR 40 20	SHR 42 20	2kV/6mA
6kV	4mA	2	SHR 20 60	SHR 22 60	6kV/2mA, 4kV/3mA, 2kV/4mA
6kV	4mA	4	SHR 40 60	SHR 42 60	6kV/2mA, 4kV/3mA, 2kV/4mA

SPECIFICATIONS

Polarity:	electronically switchable	
Ripple and Noise:	< 10mV	(standard precision)
	< 3mV	(high precision)
Temperature Coefficient:	50ppm/°C	(standard precision)
	30ppm/°C	(high precision)
	10ppm/°C	(high precision, option TC)
Resolution Voltage Setting:	2 * 10 ⁻⁶ * V _{NOM}	
Resolution Current Setting:	2 * 10 ⁻⁶ * I _{NOM}	
Resolution Voltage Measurement:	2 * 10 ⁻⁶ * V _{NOM}	(standard precision)
	1 * 10 ⁻⁶ * V _{NOM}	(high precision)
Resolution Current Measurement:	full range:	
	2 * 10 ⁻⁶ * I _{NOM}	(standard precision)
	1 * 10 ⁻⁶ * I _{NOM}	(high precision)
	2nd range:	
	50pA [I _{OUT} < 20µA]	(high precision)

Accuracy Voltage Measurement:	$\pm (0.01\% * V_{OUT} + 0.02\% * V_{NOM})$ $\pm (0.01\% * V_{OUT} + 0.01\% * V_{NOM})$	(standard precision) (high precision)
Accuracy Current Measurement:	full range: $\pm (0.01\% * I_{OUT} + 0.02\% * I_{NOM})$ $\pm (0.01\% * I_{OUT} + 0.01\% * I_{NOM})$ 2nd range: $\pm (0.01\% * I_{OUT} + 4nA)$	(standard precision) (high precision)
Rate of Voltage Change:	$1 * 10^{-6} * V_{MODE}/s$ up to $0.2 * V_{MODE}/s$	
Supply Voltage:	100 - 240V _{AC} / 50 - 60Hz	
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 x W x H):	331 x 257 x 103mm ³	

All specifications guaranteed for $1\% * V_{MODE} < V_{OUT} < V_{MODE}$

▪ OPTIONS

TC	Lower temperature coefficient
L	Lower current (100μA, high precision version only)
VCT	Voltage correction by temperature
IHB	Single channel inhibit - BNC connectors
IHD	Detector inhibit (Ortec, Canberra)

Disclaimer

The information given in this data sheet is technical data, not assured product characteristics. It has been carefully checked and is believed to be accurate; however, no responsibility is assumed for inaccuracies. The user has to ensure by adequate tests that the product is suitable for his application regarding safety and technical aspects. hivolt.de GmbH & Co. KG does not assume any liability arising out of the application or use of any product described.

Safety Advice

Design, installation and inspection of machinery and devices carrying high voltage require accordingly trained and qualified personnel. Appropriate safety rules and directives must be complied with.

Improper handling of high voltage can mean severe injuries or death and may cause serious collateral damage!