



The new SHR series represents a standalone High Precision HV laboratory SMU – Source Measuring Unit – equipped with the finest i-seq 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.

- 2/4 channels, 2kV / 6 kV versions
- electronically switchable polarity
- 6 kV channel with electronic switchable modes:
- up to 2 kV/4 mA, 4 kV/3 mA or 6 kV/2 mA
- high precision / very low ripple and noise
- Ethernet / USB interfaces, integrated iCS2 on ARM Linux server hardware
- 4.3" TFT capacitive touch display

Model SHR2020 to SHR4260: SWITCHABLE HIGH PRECISION DESKTOP HV SUPPLY

Specifications:

	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	$2 \cdot 10^{-6} \cdot V_{nom}$	
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	$2 \cdot 10^{-6} \cdot I_{nom}$	$1 \cdot 10^{-6} \cdot I_{nom}$
Accuracy current measurement* - 2nd range	n/a	n/a
Accuracy voltage measurement*	$\pm(0.01\% \cdot V_{out} + 0.02\% \cdot V_{nom})$	$\pm(0.01\% \cdot V_{out} + 0.01\% \cdot V_{nom})$
Accuracy current measurement* - full range	$\pm(0.01\% \cdot I_{out} + 0.02\% \cdot I_{nom})$	$\pm(0.01\% \cdot I_{out} + 0.01\% \cdot I_{nom})$
Accuracy current measurement* - 2nd range	n/a	$\pm(0.01\% \cdot I_{out} + 4 \text{ nA})$
Rate of voltage change	$1 \cdot 10^{-6} \cdot V_{mode}/s$ up to $0.2 \cdot V_{mode} / s$	
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 $1\% \cdot V_{mode} < V_{out} < V_{mode}$		

Configurations:

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

Order Options:

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