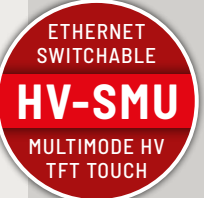


# SHR

## SWITCHABLE HIGH END HIGH PRECISION AC/DC DESKTOP HV SUPPLY



Out: 2 kV - 6 kV | 12 W per channel | 4 channels | Ripple: typ. < 2-3 mV<sub>p-p</sub>

- ▶ 2 / 4 channels, 2 kV / 6 kV versions
- ▶ Electronically switchable polarity for each channel independently
- ▶ 6 kV channel with electronical switchable modes: up to 2 kV/4 mA, 4 kV/3 mA or 6 kV/2 mA
- ▶ High precision / very low ripple and noise
- ▶ Second current measurement range 20  $\mu$ A for high precision version
- ▶ Ethernet / USB interfaces, integrated iCS2 on ARM Linux server hardware
- ▶ 4.3" TFT capacitive touch display
- ▶ Comprehensive features like logging, diagrammatic display and script control

The new SHR series represents a standalone High Precision HV laboratory 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 an 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.

SHRremote: remote the SHR simultaneously on WIN/LINUX/ MAC like a mirrored SHR display



## HIGH VOLTAGE DEVICES

## AC/DC

## SHR

## SWITCHABLE HIGH END HIGH PRECISION AC/DC DESKTOP HV SUPPLY

## SPECIFICATIONS

	SHR STANDARD	SHR HIGH PRECISION
Polarity	electronically switchable	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	$2 \cdot 10^{-6} \cdot V_{nom}$	$2 \cdot 10^{-6} \cdot V_{nom}$
Resolution current setting	$2 \cdot 10^{-6} \cdot I_{nom}$	$2 \cdot 10^{-6} \cdot I_{nom}$
Resolution voltage measurement	$2 \cdot 10^{-6} \cdot V_{nom}$	$1 \cdot 10^{-6} \cdot V_{nom}$
Resolution current measurement - full range	$2 \cdot 10^{-6} \cdot I_{nom}$	$1 \cdot 10^{-6} \cdot I_{nom}$
Resolution current measurement - 2nd range	n/a	50 pA [ $I_{out} < 20 \mu A$ ]
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	$\pm (0.01 \% \cdot I_{out} + 4 nA)$
Rate of voltage change	$1 \cdot 10^{-6} \cdot V_{nom} / s$ up to $0.2 \cdot V_{nom} / s$	$1 \cdot 10^{-6} \cdot V_{nom} / s$ up to $0.2 \cdot V_{nom} / s$
Supply voltage	100 - 264 VAC / 50-60 Hz	100 - 264 VAC / 50-60 Hz
Protection	INHIBIT, Safety loop, short circuit, overload, hardware V/I limits	INHIBIT, Safety loop, short circuit, overload, hardware V/I limits
Interfaces	Ethernet, USB(A) 2.0 (Host: Wifi, Logging, Webcam), USB(B) (remote control)	Ethernet, USB(A) 2.0 (Host: Wifi, Logging, Webcam), USB(B) (remote control)
HV connector	SHV	SHV
Case	desktop case	desktop case
Dimensions (L/W/H)	331/257/103 mm	331/257/103 mm

\* All specifications guaranteed from  $1\% \cdot V_{mode} < V_{out} < V_{mode}$

## CONFIGURATIONS

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!

## OPTIONS &amp; ORDER INFO

OPTION	ORDER INFO
LOWER TEMP. COEFFICIENT (high precision version only)	TC
LOWER CURRENT (100 $\mu A$ , high precision version only)	L
SINGLE CHANNEL INHIBIT - BNC CONNECTORS	IHB
DETECTOR INHIBIT (ORTEC, CANBERRA)	IHD

