

SHR

SWITCHABLE HIGH END HIGH PRECISION AC/DC DESKTOP HV SUPPLY



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.

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 $1\% \cdot V_{mode} < V_{out} < V_{mode}$

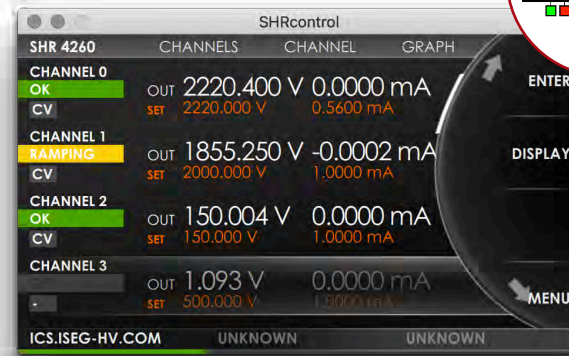
SHR

SWITCHABLE HIGH END HIGH PRECISION AC/DC DESKTOP HV SUPPLY

- ▶ 2 / 4 channels, 2 kV / 6 kV versions
- ▶ Electronically switchable polarity
- ▶ 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
- ▶ 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



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

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 & ORDER INFO

| OPTION | ORDER INFO |
|----------------------------------------------------------|------------|
| LOWER TEMP. COEFFICIENT (high precision version only) | 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 |