



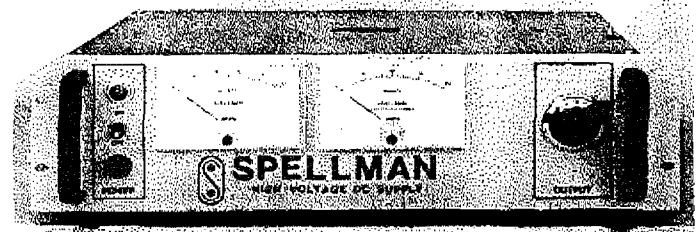
RHR SERIES

Medium Power HV Power Supplies

...proven, reliable supplies for general purpose laboratory use or OEM applications

Highlights

- Over 100 models available from 5-400 kV, 10-500 W
- Excellent regulation
- Low ripple
- Low RFI due to sinewave operation
- Low stored energy
- Overload and short circuit protected
- Three year warranty



The RHR Series provides the engineer a very wide choice of high voltage power supplies from 5 kV to 400 kV at power levels between 10 W and 500 W. The units have proven their reliability through many years of use in a wide variety of applications.

The design is based on a self-resonating sinewave oscillator operating at approximately 40 kHz. All models are overload and short circuit protected through automatic current limiting.

Over 20 options are available to adapt the unit to each specific requirement. Options include Remote Voltage Programming, Remote Voltage and Current Monitoring, Current Regulation and External Interlock.

Specifications

Input: 105-125 V ac, 50-60 Hz

Output: (see chart) voltage continuously adjustable over entire range from zero to maximum rated voltage by means of a 10-turn potentiometer; positive, negative or reversible polarity available

Load regulation: 0.01% + 1 V for a full load change

Line regulation: $\pm 0.01\%$ ± 1 V for a $\pm 10\%$ line change

Ripple: 0.02% + 2 Vrms except 0.1% rms on models 100 kV and above

Stability: 0.02% + 2 V/hr; 0.05% + 5 V over 8 hours

Metering: analog voltage and analog current meters, 2% accuracy

Physical: all units with ratings up to 100 kV are designed for 19" rack mounting (see chart); over 100 kV, the unit consists of a driver, a remote control panel (rack mountable with 15' cable length) and a high voltage multiplier stack (consult factory for outline dimensions and mounting instructions)

Options

- | | |
|---------------|-------------------------------------------------------------------------------------|
| OL | Overload Tripout |
| RC | Remote Resistance Programming |
| RVC | Remote Voltage Programming |
| C | Bench Cabinet |
| () | Non-standard Input Voltage (50-60 Hz) (specify 100, 200, 220 or 240) |
| F() | Focus Voltage Tap(s) (specify voltage) |
| CR | Current Regulation |
| TP | Remote Monitor Terminals |
| RCP | Remote Control Panel |
| BPM | Slaved Bipolar (\pm) Operations |
| OV | Overvoltage Protection |
| IC | Inhibit Circuit |
| SS | Slow Start |
| ACP | Adjustable Current Protection |
| OL/ACP | Adjustable Overload Tripout |
| DPM | Digital Panel Meters |
| EAR | External Alarm Relay |
| EI | External Interlock |
| FG | Floating Ground |
| FGLL | Floating Ground Low Leakage |
| MTP | 10-turn potentiometer for Voltage Control when current regulation (CR) is specified |

Standard Models

| MAX. kV | RATINGS | | MODEL NUMBER | HEIGHT(1) in (cm) | NET WEIGHT lbs. (kg) | | |
|---------|---------|------|--------------|----------------------|----------------------|-------------|--------|
| | mA | W | | | FIXED POL. | REV. POL. | |
| 5 | 2 | 10 | RHR5*10 | 5-1/4(13.3) | 25(12) | 25(12) | |
| | 6 | 30 | RHR5*30 | | 30(14) | 25(12) | |
| | 10 | 50 | RHR5*50 | | 30(14) | 30(14) | |
| | 20 | 100 | RHR5*100 | | 55(25) | 60(27) | |
| | 30 | 150 | RHR5*150 | | 70(32) | 75(34) | |
| 10 | 1 | 10 | RHR10*10 | 5-1/4(13.3) | 25(12) | 25(12) | |
| | 3 | 30 | RHR10*30 | | 30(14) | 25(12) | |
| | 6 | 60 | RHR10*60 | | 30(14) | 30(14) | |
| | 10 | 100 | RHR10*100 | | 30(14) | 30(14) | |
| | 20 | 200 | RHR10*200 | | 10-1/2(26.7) | 55(25) | 60(27) |
| | 30 | 300 | RHR10*300 | | 10-1/2(26.7) | 60(27) | 70(32) |
| | 50 | 500 | RHR10*500 | | 15-3/4(40) | 90(41) | 95(43) |
| 15 | 0.67 | 10 | RHR15*10 | 5-1/4(13.3) | 25(12) | 25(12) | |
| | 2 | 30 | RHR15*30 | | 25(12) | 25(12) | |
| | 4 | 60 | RHR15*60 | | 30(14) | 30(14) | |
| | 8 | 120 | RHR15*120 | | 30(14) | 30(14) | |
| | 15 | 225 | RHR15*225 | | 10-1/2(26.7) | 55(25) | 60(27) |
| | 30 | 450 | RHR15*450 | | 15-3/4(40) | 90(41) | 95(43) |
| 20 | 0.5 | 10 | RHR20*10 | 5-1/4(13.3) | 25(12) | 25(12) | |
| | 1.5 | 30 | RHR20*30 | | 25(12) | 25(12) | |
| | 3 | 60 | RHR20*60 | | 30(14) | 30(14) | |
| | 6 | 120 | RHR20*120 | | 30(14) | 30(14) | |
| | 12 | 240 | RHR20*240 | | 10-1/2(26.7) | 55(25) | 60(27) |
| | 24 | 480 | RHR20*480 | | 15-3/4(40) | 90(41) | 95(43) |
| | 30 | 0.33 | 10 | | RHR30*10 | 5-1/4(13.3) | 25(12) |
| 1 | | 30 | RHR30*30 | 25(12) | 25(12) | | |
| 2 | | 60 | RHR30*60 | 30(14) | 30(14) | | |
| 4 | | 120 | RHR30*120 | 30(14) | 30(14) | | |
| 5 | | 150 | RHR30*150 | 50(23) | 55(25) | | |
| 8 | | 240 | RHR30*240 | 10-1/2(26.7) | 55(25) | | 60(27) |
| 16 | | 280 | RHR30*480 | 15-3/4(40) | 90(41) | | 95(43) |
| 40 | | 0.75 | 30 | RHR40*30 | 5-1/4(13.3) | | 40(18) |
| | 1.5 | 60 | RHR40*60 | 40(18) | | 40(18) | |
| | 3 | 120 | RHR40*120 | 40(18) | | 40(18) | |
| | 6 | 240 | RHR40*240 | 10-1/2(26.7) | | 60(27) | 60(27) |
| | 12 | 480 | RHR40*480 | 15-3/4(40) | | 90(41) | 95(43) |

| MAX. kV | RATINGS | | MODEL NUMBER | HEIGHT(1) in (cm) | NET WEIGHT lbs. (kg) | | |
|---------|---------|-----|--------------|----------------------|----------------------|-------------|--------|
| | mA | W | | | FIXED POL. | REV. POL. | |
| 50 | 0.5 | 25 | RHR50*25 | 5-1/4(13.3) | 40(18) | 52(24) | |
| | 1 | 50 | RHR50*50 | | 40(18) | 52(24) | |
| | 3 | 150 | RHR50*150 | | 8-3/4(22.2) | 55(25) | 70(32) |
| | 5 | 250 | RHR50*250 | | 10-1/2(26.7) | 60(27) | 75(34) |
| | 10 | 500 | RHR50*500 | | 15-3/4(40) | 90(41) | 95(43) |
| 60 | 0.5 | 30 | RHR60*30 | 5-1/4(13.3) | 40(18) | 52(24) | |
| | 1 | 60 | RHR60*60 | | 40(18) | 52(24) | |
| | 2 | 120 | RHR60*120 | | 40(18) | 52(24) | |
| | 4 | 240 | RHR60*240 | | 10-1/2(26.7) | 60(27) | 75(34) |
| | 8 | 480 | RHR60*480 | | 15-3/4(40) | 90(41) | 95(43) |
| | 80 | 1 | 80 | | RHR80*80 | 8-3/4(22.2) | 52(24) |
| 3 | | 240 | RHR80*240 | 10-1/2(26.7) | 72(33) | 75(34) | |
| 6 | | 480 | RHR80*480 | 15-3/4(40) | 108(49) | 115(52) | |
| 100 | 1 | 100 | RHR100*100 | 8-3/4(22.2) | 52(24) | 52(24) | |
| | 1.5 | 150 | RHR100*150 | 8-3/4(22.2) | 69(31) | 70(32) | |
| | 2 | 200 | RHR100*200 | 10-1/2(26.7) | 72(33) | 75(34) | |
| | 5 | 500 | RHR100*500 | 15-3/4(40) | 108(49) | 115(52) | |
| | 150 | 1 | 150 | RHR150*150 | 34(86.4) | 125(57) | —(2)— |
| 2 | | 300 | RHR150*300 | 40(101.6) | 145(66) | —(2)— | |
| 200 | 0.5 | 100 | RHR200*100 | 34(86.4) | 150(68) | —(2)— | |
| | 1 | 200 | RHR200*200 | 34(86.4) | 170(77) | —(2)— | |
| 300 | 0.5 | 150 | RHR300*150 | 48(122) | 175(80) | —(2)— | |
| | 1 | 300 | RHR300*300 | 60(155.4) | 200(91) | —(2)— | |
| 400 | 0.5 | 200 | RHR400*200 | 48(122) | 225(102) | —(2)— | |
| | 1 | 400 | RHR400*400 | 60(155.4) | 225(102) | —(2)— | |

* Specify "P" for positive polarity, "N" for negative polarity or "PN" for reversible polarity; note some models not available in "PN"

(1) All units are configured for mounting in a standard 19 inch rack and are 16-1/2 inches deep

(2) Consult the factory for size and weight of units with reversible polarity over 100 kV (stack units)

How to specify

(series) (max. HV) (polarity) (Watts) / (opt.) / (opt.) /

[sample] **RHR 10 PN 30 / RVC / TP /**

RHR10PN30/RVC/TP/...etc.