

## DC Sputtering Power Supplies

All with "Venus Arc Control"

HVCSH, HVCSE, HVCS & HVCS-2X Dual from 400 Watts to 10 kW

*The HVCSH, HVCSE or HVCS series is designed to provide the ultimate in control & reliability for your Sputtering process.*

5 ¼ Rack 400Watt to 1200 Watt

HVCS- { }

Half Rack 400 Watt to 600 Watt

5.25" Multi Function Metered Panel & 7" Metered

HVCSE- { }

HVCSH- { }

2kWatt 7" Full Rack

HVCS-2.5K



### Dual Independent Sputtering Power Supplies in One Package

Select any Two DC Supplies with a Total Power Sum of 2600 Watts or less



Delivery Less than 4 Days on some models less than two weeks on all models!

#### Basic Features:

- HV Output RF or N-Type Connector.
- Rugged and Design to last!
- **ARC Suppression & Ride-Thru**
- Digital Front Panel Meters and Controls for Voltage, & Current.
- Self Protection from Dead Short, Arc, Over Voltage, Over Current, & Temperature.
- OEM and Custom Designs. Other Voltages and Power Levels available upon request
- Half Rack 7"x 9.5" 300 to 600 Watt
- Blank Panel Half Rack 5.25"x9.5"x 16" to 600W
- 5.25" Rack 400 Watt to 1,200 Watt.
- 7" Rack 2kW to 2.5kW or Dual Unit.

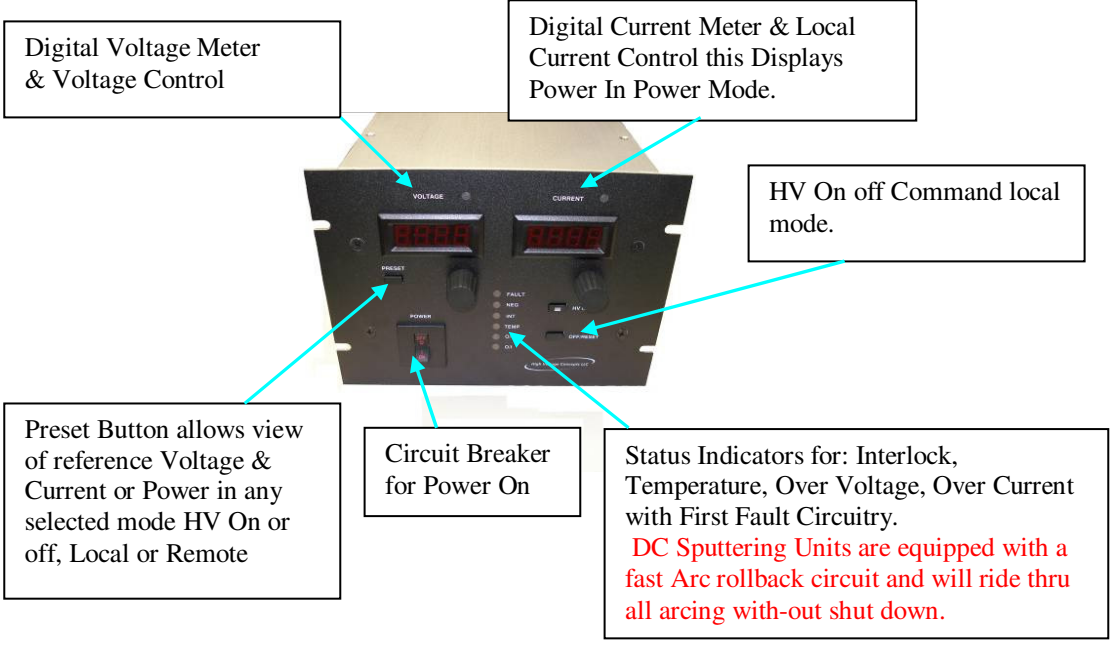
#### Remote:

- Extensive & Flexible Remote Monitoring & Programming Standard HVC Pin-out.
- Current Ref. 0-5V or 0-10V.  
(See remote control for details.)

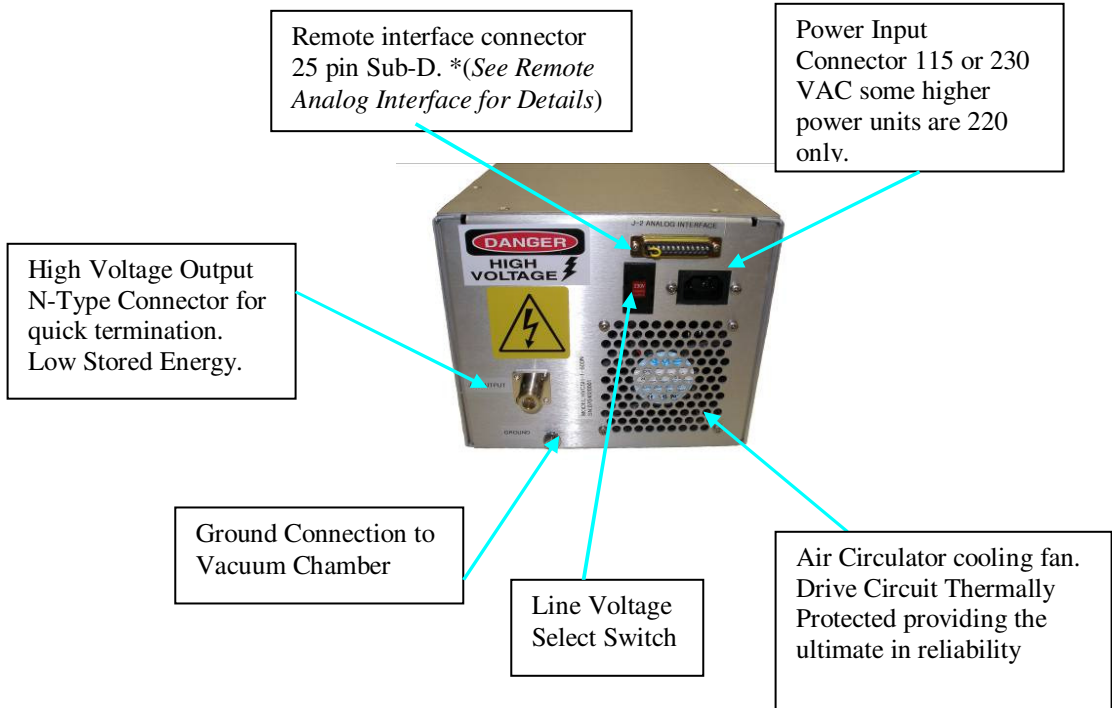
#### Mechanicals:

- 7" Chassis height Half Rack (Shown Left). Also available in 5.25" & 7" Ht. Full 19" Rack, 19" Deep used for Single & Dual Units.
- 9.5" Wide Half Rack
- 19" Deep
- Weight: Only 18 lbs for Half Rack
- Air cooled

### Front Panel Function Description



### Rear Panel Description



**The Power Supply will have the FEMALE SUB-D connector on the back panel.  
The MALE SUB-D connector with solder cups is provided with the unit.**

1. **Voltage Reference:** 0-10 Volts Input = 0 to Full Output Voltage. This Reference must be connected to 10 Volts (Pin24) when using this supply in Current or Power mode, otherwise the auto-crossover control will believe you are requesting near zero voltage and no out will result. This only operates in remote mode.
2. **Current or Power Reference:** 0-10 Volts Input = 0 to Full Output Current or Power when in Power Mode. This Reference must be connected to 10 Volts when using this supply in Voltage only mode, otherwise the auto-crossover control will believe you are requesting near zero current or Power and no out will result. This only operates in remote mode.
3. **Remote off/ Reset:** This pin must be pulled LOW in order to turn HV Off and Reset any Fault that has terminated normal operation. This pin operates as a momentary LOW and must be returned HIGH for next cycle normal operation. ***DO NOT rely on this for Personal Safety, always shut off circuit breaker and remove power plug when working on your load or system in which this power supply is connected.*** This pin will operate in local and remote mode, as well as the front panel HV off/ reset.
4. **Remote HV On:** Pull this pin Momentary LOW to apply HV On. This Pin must be returned HIGH before pulling LOW to activate HV On. If held LOW the power supply will not be able to apply the HV On condition. This pin will not activate HV On with an existing Fault condition on the display. This pin does NOT operate in local mode.
5. **Power Regulation Select:** Pulling this pin Low will change to Power Regulation From Current Regulation Also front panel current meter will read power instead of current. This pin may be internally low if the unit purchased is power regulation only
6. **Remote kV Monitor:** 0-10.0 Volts = 0 to Full Output Voltage. Output Impedance of this device is 1k Ohms. This Function is available in any mode.
7. **Remote Over Voltage Reference:** 0 to 5.0 Volts = 0 to Full Output Voltage over rides the internal Over Voltage setting which is fixed at 105% of the full output voltage. This function is available in any mode.
8. **Remote Over Current Reference:** 0 to 5.0 Volts = 0 to Full Output Current over rides the internal Over Current setting which is fixed at 105% of the full output current. This function is available at all times.
9. **+5 volts.**
10. **Leave Disconnected.**
11. **+15 Volts** 20mA Max
12. **-15 Volts** 20mA Max
13. **Common.**
14. **HV On Indicator:** When HV On is commanded this pin goes low. Its output impedance is 2k ohms and the high position is +5 volts. This signal is always present in local or remote modes.
15. **Common.**
16. **Local/ Remote Command:** Pulling this pin LOW and holding will remove control from the front panel. The Front Panel Potentiometer References will be over ridden as well as the HV On Command. Meters will function normally and the Preset button will read the remote program reference inputs instead of the Front Panel Potentiometers. All LED function remain.
17. **Temperature:** This pin reads the temperature of the IGBT in the power driver. The measurement is in Kelvin/100. Room temperature will read 2.93V or 293° Kelvin. This function is available in any mode.
18. **Power Monitor:** 0-10 Volts = 0 to Full Power. Impedance of this device is 1k Ohms.
19. **Remote Current Monitor:** 0-10Volts = 0 to Full Output Current. Output Impedance of this device is 1k Ohms. This function is available in any mode.
20. **Fault Signal Indicator:** When a fault is triggered this pin goes low. Its output impedance is 2k ohms and the high position is +5 volts. This signal is always present in local or remote modes.
21. **Common.**
22. **+5 volts.** 100mA Max.
23. **Leave Disconnected.**
24. **Reference Voltage +10 Volts:** 5mA Max Current Draw.
25. **External Interlock:** This pin must be held LOW to Common in order to operate power supply. A HIGH or an OPEN on this pin will trip the unit off via an Interlock FAULT and block the application of HV On. This pin must be held LOW before the OFF/ RESET command can be used to clear the fault. This function is always available.



HVCSH-6 Shown  
in 7" Half Rack



Blank



VPC



HVCS-6-2X Dual Sputtering  
Shown in 7" Chassis

**Center Two:** HVCSE-6 is 5.25" Half Rack Blank & HVCSE-6-VPC with Select Full Metering & Monitoring both of these are Remote Operation Only

**Model Line Table:**

Model	Max Power	Max Current	Input VAC
HVCSH-4, HVCS-4, & HVCSE-4 & HVCSE-4-VPC	400 watts	700mA	115 / 220
HVCSH-6, HVCS-6, & HVCSE-6 & HVCSE-6-VPC	600 watts	1,000mA	115 / 220
*HVCS-12	1200 watts	2 Amps	220 Only
**HVCS-2K	2000 watts	3 Amps	220 Only
**HVCS-2.5K	2500 watts	4 Amps	220 Only
***HVCS-4-2X, HVCS-6-2X, HVCS-12-2X	Select any Two of the Same Power The Sum of Which Totals 2400 Watts or Less. (Ex: Two 1200 Watt Power Supplies).		220 Only
****HVCS-[xx-xx]-2X	Select Any Two Different Power Levels The Sum of Which Totals 2600 Watts or Less in any Combination. ( Ex. One 2kW & One 600 Watt).		220 Only
HVCS-5K	5,000 watts	7.5 Amps	208 or 380 3 ph
HVCS-10K	10,000 watts	15 Amps	208 or 380 3ph

\*Note: All 1200 Watt are 5.25" Chassis Air Cooled    \*\*Note: 2K & 2.5K Watt 7" Chassis Air Cooled

\*\*\* Note: Any Two Pairs of Same Power Level Outputs

\*\*\*\* Note: Combination units may mix any two different power output power supplies

Line Regulation: +/- 0.01% of Full Voltage  
 Load Regulation: +/- 0.05% of Full Voltage  
 Low Stored Energy  
 Operating Ambient Temperature: -15° C to 45° C  
 Stability: +/- 0.01% per hour  
 Weight: 18 to 26 Lbs.

Note: Specifications are subject to change without notice.

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