

Venus power supply module

Date of issue: March 20, 2005

Product model: V series

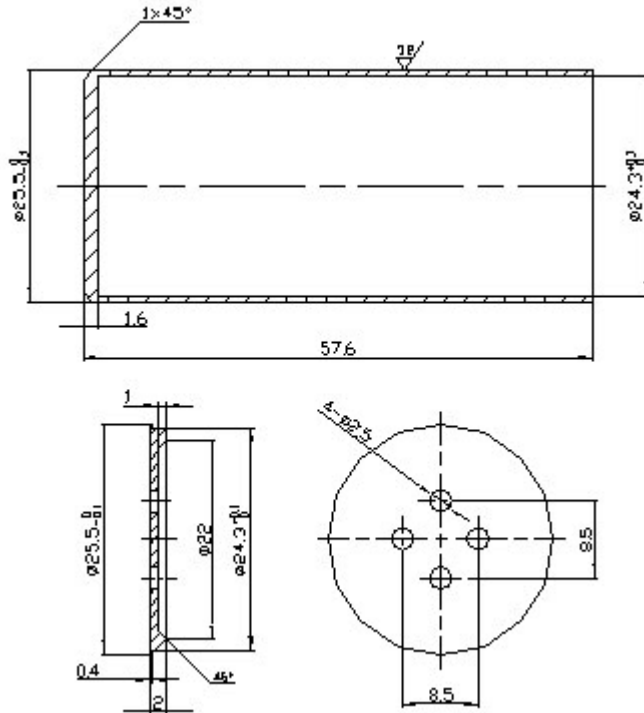


1. Lead wires

Red wire: positive terminal of input power supply; black wire: ground wire of input power supply; green wire: control terminal of output voltage; white wire: HV output

2. Main technical parameters

- (1) Working temperature range: $-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$
- (2) Input power supply voltage: (+VCC) $+0\text{V} \sim +18\text{V}$
- (3) Input power supply current: less than 150mA
- (4) Input control voltage: $+0\text{V} \sim +\text{VCC}$
- (5) Control voltage input resistance: 150K
- (6) Output voltage: $0 \sim +1800\text{V}$
- (7) Output current: 1mA
- (8) Output ripple: 200mVp-p, typical 100mVp-p.(with recommended filter: 5mVp-p; typical 1mVp-p.)
- (9) Temperature stability: lower than $\pm 40\text{PPM}/0\text{ C}$, typical $\pm 20\text{PPM}/0\text{ C}$
- (10) Load adjusting rate: $\pm 0.05(50\% \text{ load change})$
- (11) Linear adjusting rate: $\pm 0.1\%(10\% \text{ linear change})$
- (12) Shock resistance: 25G, 0~300Hz
- (13) Output characteristic: the magnification times 100 relationship exists between the output voltage control terminal voltage and the output voltage.
- (14) Mechanical dimension:



3. Operating requirement

(1) In some case for convenient wiring, the green wire and red wire can be wired together, then connected to the control terminal that can supply power just for the purpose of executing control and energy supply at the same time. However, when using this control mode for 0~+500V output, the relationship between output voltage and the control voltage is not exact the magnification times 100 relationship.

(2) If power output is greater than $600\mu\text{A}$ and using the control mode to wire the green wire and red wire together, the magnification relationship between the output voltage control terminal voltage and the output voltage might be less than 100. The greater the power output, the smaller the magnification times.

(3) Never let the environmental temperature be higher than the highest working temperature of the module for a long time. The module can work reliably for a long time without any heat damage within rated working temperature range. The maximum laboratory time is 200h continuous working. However, after working environmental temperature is higher than the rated working temperature, the damage and aging of elements, devices and materials would speed up.

(4) If it is required to make the HV output ripple smaller for application, just wire a RC filter using the self-contained resistances and HV capacitances; in such way, the ripple can be less than 1 mVp-p in general. See the attached drawing for the wiring method for the RC filter.

4. Recommended filter wiring method:

