

3.0 GENERAL DESCRIPTION

The OL20K/803/24 power supply is a high performance switched mode unit designed and manufactured by HiTek Power. It is a fully regulated closed-loop system capable of generating 80kV @ 200mA continuously, with a 270mA surge current available for up to 1 second at reduced output voltages. Control is maintained down to a few hundred watts.

The power supply comprises two units, a rack mounting or free-standing power converter through which remote controls are facilitated and a separate HV unit employing a modular disc construction. Three cable assemblies, one for ac power drive to the HV unit, one for feedback and monitoring and an earth bonding cable connect these two units. These cable assemblies are supplied with the equipment.

Power conversion is achieved by zero-volt switching a full bridge of the latest generation Insulated Gate Bipolar Transistors providing for high efficiency and excellent inherent ruggedness.

Reliability is of prime importance, and to this end numerous features are incorporated to ensure system integrity is maintained during adverse operating conditions. Such features include continuous primary current monitoring with fast pulse truncation and soft-start, extensive thermal monitoring and automatic shutdown on key components, passive output current limiting for instantaneous surge control and independent output overvoltage sensing.

The above features combine to give exceptional reliability even in an arduous operating environment.

3.1 Remote Control

This power supply is operated by remote control via the connector situated on the rear panel. Full control and monitoring functions are available.

3.2 Safety

The power supplies described in this handbook generate voltages that are hazardous and can be fatal. They should only be installed and used by personnel who have received the appropriate training and who are fully aware of the hazards that exist.