Glassman 1000 Watt Power Supply

(PS) PS/WX75N12

Features

Pulse-Width Modulation. Off-the-line pulse-width modulation provides high efficiency and a reduced parts count for improved reliability.

Air Insulated. The WX Series features "air" as the primary dielectric medium. No oil or encapsulation to impede serviceability or increase weight.

Constant Voltage/Constant Current Operation. Automatic crossover from constant-voltage to constant-current regulation provides protection against overloads, arcs, and short circuits.

Low Ripple. Ripple is less than 0.05% of rated voltage at full load.

Tight Regulation. Voltage regulation is better than 0.005% for allowable line variations and 0.01% + 1 mV/mA for load variations. Current regulation is better than 0.05% from short circuit to rated voltage.

Front Panel Controls (Analog and Digital Versions). Separate 10-turn controls with locking vernier dials are used to set voltage and current levels. A high voltage enable switch and an AC power on/off switch complete the panel controls. L.E.D.'s indicate when high voltage is on, the output polarity, and whether the supply is operating in a voltage or current regulating mode. For the blank panel version, only a power on/off switch is provided on the panel.

Specifications

Unit operates down to zero output with very slight degradation of performance.

Input: 198-242 V RMS, 48-63 Hz, single-phase, <9.5A. Connector per IEC 320 with mating line cord terminated with NEMA 6-15 plug.

Efficiency: Typically 83% at full load.

Output: Continuous,stable adjustment, from 0 to rated voltage or current by panel mounted 10-turn potentiometers with 0.05% resolution, or by external 0 to 10V signals is provided. Linearity is <1% of rated. Accuracy is 1% of rated + 1% of setting. Repeatability is <0.1% of rated.

Stored Energy: 6 Joules, maximum, up to 50 kV. 9 Joules, maximum, 60 and 75 kV.

Voltage Regulation: <0.005% for the specified line variations and 0.01% + 1 mV/mA for load variations.

Ripple: <0.05% of rated voltage + 0.5 V RMS at full load.

Current Regulation: <0.05% from short circuit to rated voltage at any set current.

Voltage Monitor: 0 to + 10 V DC, equivalent to zero to rated voltage. Accuracy, 1% of reading + 1% of rated voltage.

Current Monitor: 0 to + 10 V DC, equivalent to zero to rated current. Accuracy, 1% of reading + 0.05% of rated current.

Stability: 0.01% per hour after 1/2 hour warm-up. 0.05% per 8 hours.

Voltage Rise/Decay Time Constant: Typically 50 ms rise or decay time constant, using HV on/off or remote voltage control, with a 50% resistive load.

Temperature Coefficient: 0.01%/ degree C.

Ambient Temperature: -20 to +45 degrees C, operating; -40 to +85 degrees C, storage.

Polarity: Positive, negative, or reversible with respect to chassis ground.

Protection: Automatic current regulation protects against all overloads, including arcs and shorts. Fuses, surge-limiting resistors, and low-energy components provide ultimate protection.

Remote Controls: Common, +10 V reference, interlock, current monitor, current program, voltage monitor, voltage program, HV enable/disable, and ground provided on a rear panel mounted terminal block.

External Interlock: Open off, closed on. Normally latching except on blank panel version where it is non-latching.

HV Enable/Disable: 0-1.5 V off, 2.5-15 V on.