EW Series Extended Current* 500 Watt Regulated High Voltage DC Power Supplies

Up to 60kV… 3.5 Inch Panel Height Less than 18 pounds

Laboratory Performance

Enhanced Features

Fully compliant with the European harmonized EMI directive, EN50082-2, and with the low voltage (safety) directive, 73/23/EEC.

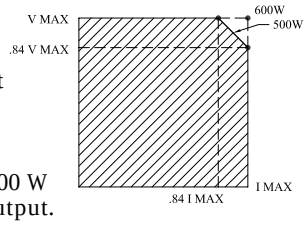
CE Check the specs… and compare

Models from 0 to 1 kV through 0 to 60 kV

The EW Series is a 500 watt regulated high voltage DC power supply with an important difference…maximum current ratings are equivalent to a 600 W supply! This maximum current, which is available for all output voltages up to 84% of rated voltage, should be of significant interest for many applications. The EW is offered with dual analog voltage and current meters or, optionally, with dual digital meters or a blank panel for OEM/systems applications.

Features:

*Extended Current. EW Series models have maximum current ratings that are equivalent to a 600 W supply. These currents are available up to 84% of rated output voltage. Above this point,current is linearly derated to maintain a constant 500 W maximum output.



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

Air Insulated. The EW Series features "air" as the primary dielectric medium. No oil or encapsulation is used 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 typically less than 0.02% of rated voltage at full load.

Tight Regulation. Voltage regulation is better than 0.005% for allowable line and load variations. Current regulation is better than 0.5% 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.

Remote Control Facilities. As standard, all EW Series supplies output voltage and current program/monitor terminals, TTL high voltage enable/disable, safety interlock terminals, and a + 10 volt reference source.

Small Size and Weight. EW Series power supplies occupy only 3.5 inches of panel height. Net weight is less than 18 pounds.

Warranty. Standard power supplies are warranted for three years; OEM and modified power supplies are warranted for one year. A formal warranty statement is available.

Designing Solutions for High Voltage Power Supply Applications

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Specifications

(From 5% to 100% rated voltage. All units operate down to zero output with very slight degradation of performance.)

Input:102-132 V RMS, single-phase, 48-63 Hz, <10A. Connector per IEC 320 with mating line cord, terminated with NEMA 5-15 plug.

Efficiency: Typically 85% 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. Voltage accuracy is 0.5% of setting, 0.2% of rated. Repeatability is <0.1% of rated.

Stored Energy: <1.5 Joules, 20 kV; <4 Joules, 60 kV.

Voltage Regulation: Better than 0.005% for specified line variations and 0.005% + 1 mV/mA for load variations.

Ripple: <0.02% of rated voltage + 0.5 V RMS at full load.

Current Regulation: Better than 0.1% from short circuit to rated voltage at any load condition.

Voltage Monitor: 0 to + 10 V equivalent to 0 to rated voltage. Accuracy, 0.5% reading + 0.2% rated.

Current Monitor: 0 to + 10 V equivalent to 0 to rated current. Accuracy, 1% reading + 0.05% rated for single polarity, 1% reading + 0.1% rated for reversible polarity.

Stability: 0.01% per hour after1/2 hour warmup, 0.05% per 8 hours.

Voltage Rise/Decay Time Constant: 50 ms typical with a 30% resistive load using either HV on/off or remote programming control.

Temperature Coefficient: 0.01% per degree C.

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

Polarity: Available with either positive, negative, or reversible polarity 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: Terminal block is provided for all remote functions, including common, +10 V reference, interlock, voltage and current program/monitor, TTL, ground, and local control, provided on a rear panel terminal block.

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

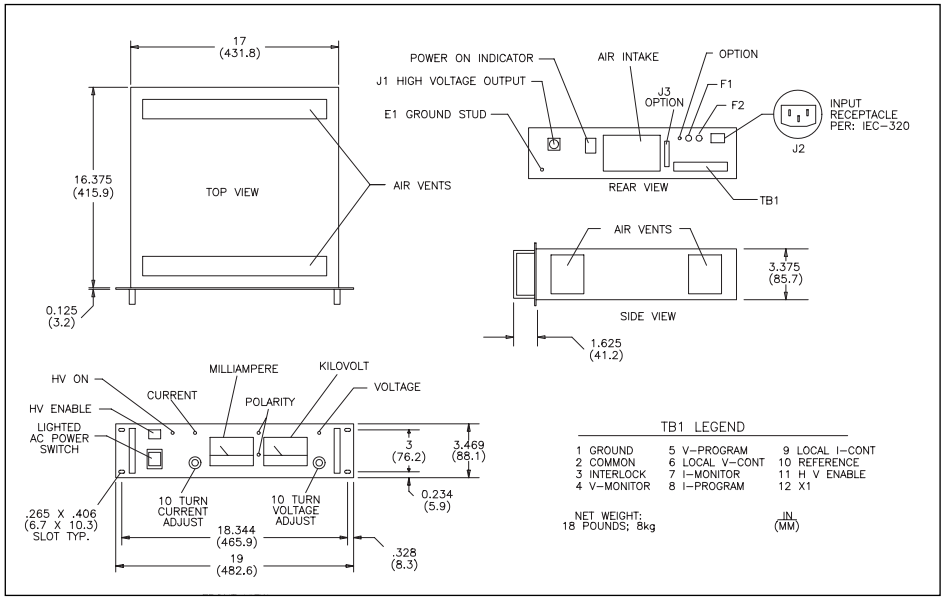
HV Enable/Disable. 0-1.5 V off, 2.5-15 V on.

Options

Symbol	Description
100	90-116 V input, 48-63 Hz. NEMA 5-15 plug.
200	180-232 V input, 48-63 Hz. NEMA 6-15 plug.
220	200-264 V input, 48-63 Hz. NEMA 6-15 plug.
400	48-420 Hz input.
DM	3-1/2 digit LCD panel meters.
NC	Blank front panel, power switch only.
CT	Current trip. Power supply trips off when the load current reaches the programmed level. This option has a rear panel switch that selects either “trip” operation or current limiting.
ZR	Zero start interlock. Voltage control, local or remote, must be at zero before accepting an enable signal.
SS	Slow start ramp. Specify standard times of 1, 2, 3, 5, 10, 15, 20, or 30s +/- 20%
5VC	0-5 V voltage and current program/monitor.

Models

Positive Polarity	Negative Polarity	Reversible Polarity	Output Voltage (kV)	Output Current (mA)	Output Cable	Panel Height (in)
Reversible only		EW1R600	0-1	0-600	RG-59	3.5
		EW1.5R400	0-1.5	0-400	RG-59	3.5
		EW2R300	0-2	0-300	RG-59	3.5
		EW3R200	0-3	0-200	RG-59	3.5
		EW5R120	0-5	0-120	RG-59	3.5
EW7P85	EW7N85	EW7R85	0-7	0-85	RG-8U	3.5
EW10P60	EW10N60	EW10R60	0-10	0-60	RG-8U	3.5
EW15P40	EW15N40	EW15R40	0-15	0-40	RG-8U	3.5
EW20P30	EW20N30	EW20R30	0-20	0-30	RG8U	3.5
EW25P24	EW25N24	EW25R24	0-25	0-24	RG-8U	3.5
EW30P20	EW30N20	EW30R20	0-30	0-20	RG-8U	3.5
EW40P15	EW40N15	EW40R15	0-40	0-15	RG-8U	3.5
EW50P12	EW50N12	EW50R12	0-50	0-12	RG-8U	3.5
EW60P10	EW60N10	EW60R10	0-60	0-10	RG-8U	3.5



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