



Instructions for IQ DC Power Supply

The IQ DC Power Supply is a dc to ac inverter module intended for operation of ac powered devices from a dc supply. The unit will operate the Cutler-Hammer



MP-3000, IQ 1000 II, URTD, IQ Data Plus, Assemblies Electronic Monitor, or other ac-powered equipment requiring no more than 30VA of power at any power factor.

NOTE: It may not be suitable for energizing devices requiring inrush currents over 1 A (e.g., some contactors and relays).

FEATURES

- Handles input voltages ranging from 40Vdc to 250Vdc with no need to set switches or jumpers.
- The ac output is isolated from the incoming power.
- Two LEDs provide operating and troubleshooting indications.
- Withstands output short circuits, while providing ample power to start loads with inrush up to 1 A.

SPECIFICATIONS

Rated Supply Voltage: 40Vdc to 250 Vdc. Operates from 38 Vdc to 275 Vdc.

Output: Square wave, 60Hz, 125Vac \pm 2Vac at no load
Output voltage varies less than \pm 2% as a function of dc supply voltage within rated range.

Output voltage varies less than \pm 5% per 100mA load change.

Rated Power Output: 30VA, at any power factor.

Ambient Temperature Range: 0°C to +70°C at full load.

Maximum Lead Length: Input: 35 ft of #14 AWG.

Output: 100 ft of #14 AWG.

Protection Limits: Average output current is limited to 0.4 A. After an average current overload, unit cools itself for approximately 2 minutes and restarts. Peak short-circuit output current is limited to 1 A on a cycle-by-cycle basis.

INSTALLATION

This device is designed to be installed, operated, and maintained by adequately trained workmen. These instructions do not cover all details, variations, or combinations of the equipment, its storage, delivery, installation, check-out, safe operation, or maintenance. Care must be exercised to comply with local, state, and national regulations, as well as safety practices, for this class of equipment.



CAUTION

CAUTION: Remove all power from the device to which the IQ DC Power Supply is being connected; otherwise, serious or fatal personal injury and equipment damage may result.

The IQ DC Power Supply should be fastened securely in place before operating. Locate the module in an area where air can freely move about the unit. While mounting the unit absolutely NO power should be connected. See Figure 1 for mounting holes.

1. With a recessed socket head wrench remove the four bolts securing the front cover.
2. Remove the front cover.
3. Fasten the module to the intended structure with #8 screws

4. Replace the front cover and the four bolts to secure the front cover.

WIRING

See Figure 2 for electrical connections.

1. Note that the unit has no ON-OFF switch – identify some external means of removing the dc supply.
2. Connect the ac load to the terminals labeled AC OUT. Either terminal can be connected to ac common.
3. Connect the negative dc supply lead to the terminal labeled DC GND. **Note: This terminal is not connected to safety or case ground – it can not provide a dc circuit ground.**
4. Connect the positive dc supply lead to the terminal labeled DC IN.

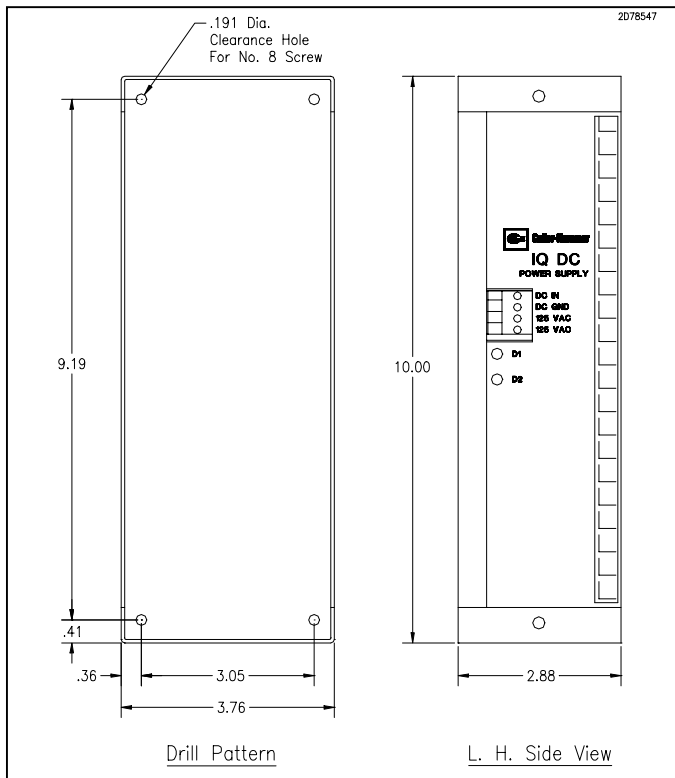


Figure 1. Outline Dimensions

NOTE: If a single IQ DC Power Supply is being used to power both an IQ 1000 II and a URTD or other load together, contact Cutler-Hammer Technical Assistance for specific wiring instructions.

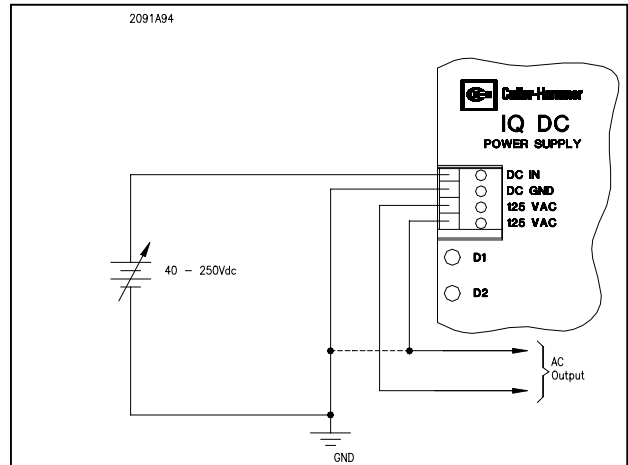


Figure 2. Connection Diagram

RECOMMENDED CONNECTIONS
 Use #14 AWG conductors, copper only.
 Tighten terminals to 7 pound-inches.

OPERATION

Dc voltage may be applied to the IQ DC Power Supply by any number of methods. It will start reliably with a 250 Vdc step input from a contactor or with a slow ramp from a dc power source.

When dc power is applied, the unit will wait approximately 21 seconds with both LED's on. After activating the ac output the unit will blink the LED labeled D1 and may or may not indicate an overload briefly when starting. The various LED indications are listed below. Normal conditions have D1 blinking and D2 dark; but D2 may blink sporadically without indicating a problem.

AVERAGE-CURRENT OVERLOAD

D1 and D2 — blinking alternately

PEAK CURRENT OVERLOAD OR OUTPUT SHORT

D1 — blinking

D2 — blinking ON or OFF sporadically, or ON continuously.

To recover, remove or lighten load and wait two (2) minutes for the start cycle to begin.

**FOR TECHNICAL ASSISTANCE CALL 1-800-809-2772
 OR VISIT <http://www.ch.cutler-hammer.com/pmp>**

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