Instructions for IQ DC Power Supply

I.L. 17286A

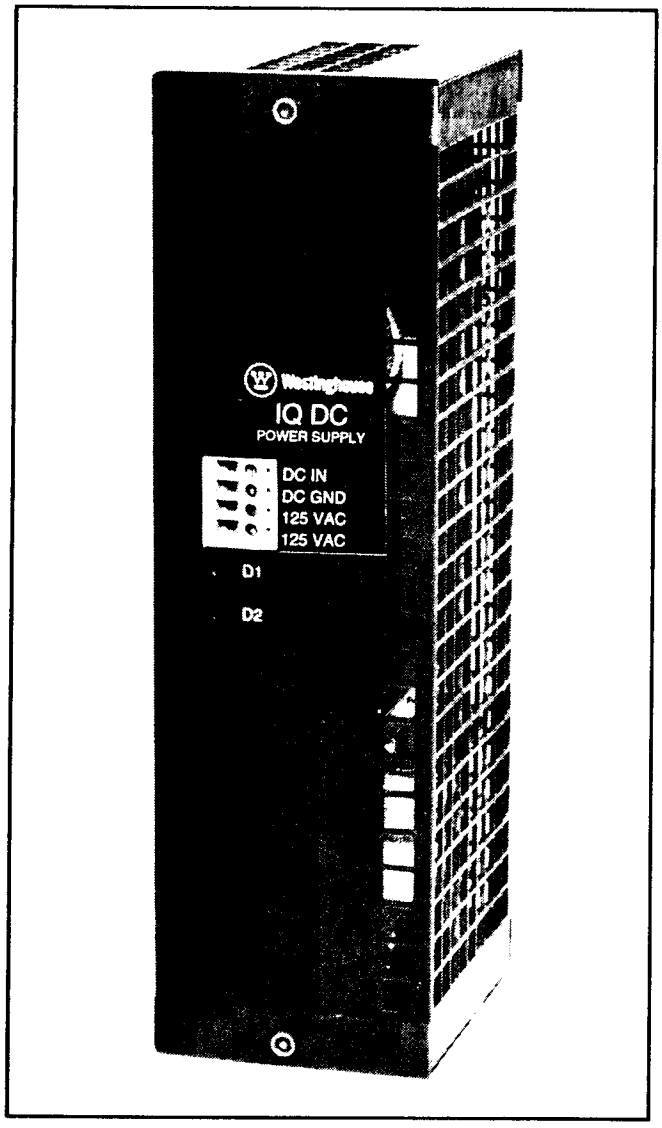

Fig. 1 IQ DC Power Supply

THE MODULE

The IQ DC Power Supply is a DC to AC invertor module intended for use where DC power is available but some AC is required. The unit will operate several IQ 1000's, IQ Data Plus's, Assemblies Electronic Monitors, 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 higher inrush currents (e.g., contactors and relays).

FEATURES

Input voltages ranging from 40VDC to 250VDC can be applied to the IQ DC Power Supply from a single two-wire input with no need to set switches or adjust jumpers. There are only four connections — two for DC power in, two for AC power out. The AC output is isolated from the incoming power. Two LED indicating lights provide operating and troubleshooting functions. An aluminum case protects the unit. Built-in protection features protect against short circuits while providing ample power to start loads with high inrush currents.

SPECIFICATIONS

Supply Voltage: 40VDC (–5%) to 250VDC (+10%)

Output: 60Hz, 125VAC (Nominal) Square Wave
Nominal Voltage is ±2VAC as a function of input voltage and Nominal Voltage is ±5VAC as a function of load.

Rated Power Output: 30VA, at any power factor

Temperature Range of surrounding air: 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: Peak output current is limited to 1 ampere. Average output current is limited to 0.4 ampere. Unit cools itself and restarts after an average current overload.

Peak current is limited on a cycle-by-cycle basis. ON-OFF cycling is limited by a POWER-ON delay.

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: Remove all power from (de-energize) the device to which the IQ DC Power Supply is being attached or wired; 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.

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 3 for electrical connections.

1) There is no ON-OFF switch for the IQ DC Power Supply. Do not connect it to a circuit that does not have the power removed. The same disconnect means that removes DC power from the control panel should be used for the IQ DC Power Supply.
2) Connect the AC wires to the terminals labeled AC OUT. It does not matter which terminal is considered common.
3) Connect the grounded DC line to the terminal labeled DC GND.
4) Connect the ungrounded DC line to the terminal labeled DC IN. The IQ DC Power Supply Module operates over a wide range of voltages but is limited to the specified range of input voltages.

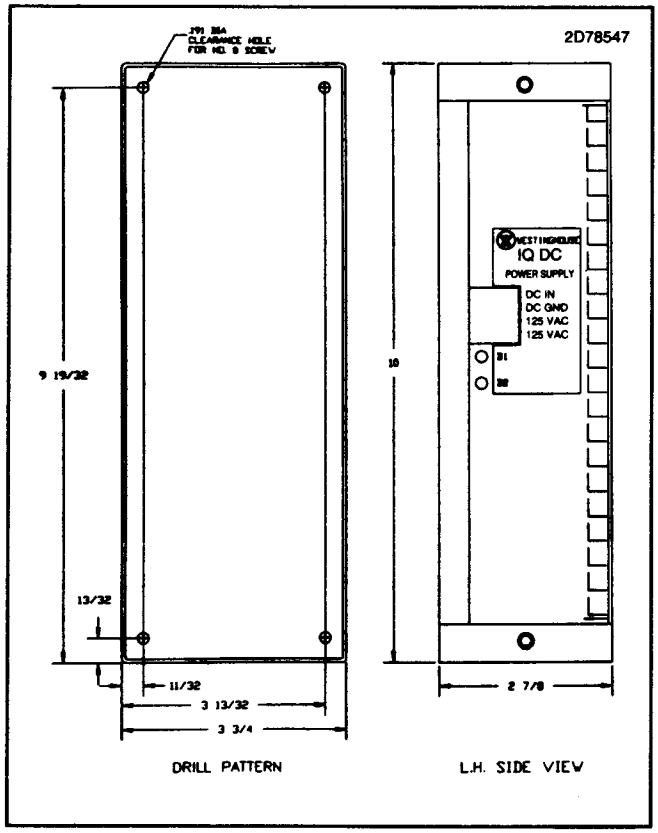

Fig. 2 Outline Dimensions (in inches)

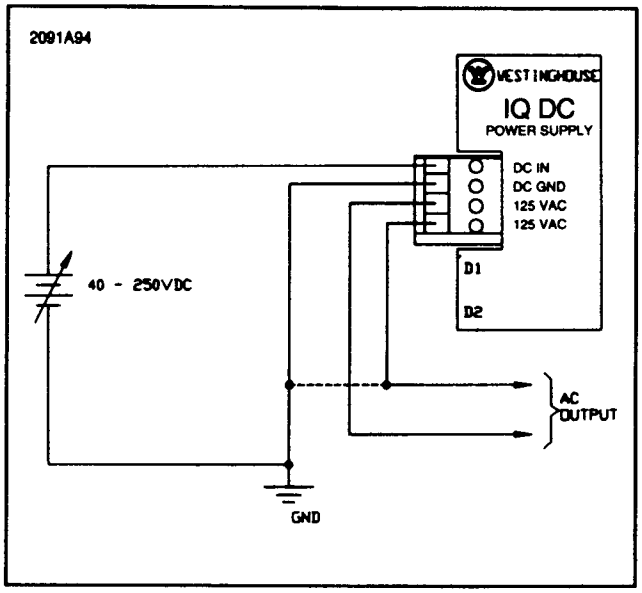

Fig. 3 Connection Diagram

RECOMMENDED CONNECTIONS
Use copper conductors only. #14 AWG Red or Black for AC #14 AWG Blue for DC Tighten to 7 lb.-in.

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 power is applied to the unit the module will wait approximately 1 second with both LED's bright. After activating the AC outputs 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.

AVERAGE CURRENT OVERLOAD
D1 and D2 — blinking alternately

PEAK CURRENT OVERLOAD (SHORTED TERMINALS)
D1 — blinking
D2 — blinking ON or OFF sporadically, or sometimes ON continuously

To recover, remove or lighten load. If the blink is sporadic this condition is not serious and may be ignored.

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