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IIS 50 I

INTERRUPTIBLE 50W UNIT INVERTER EQUIPMENT

INSTRUCTION MANUAL

IMPORTANT SAFEGUARDS

When using electrical equipment, basic safety precautions should always be followed, including the following:

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

1. **CAUTION** – To prevent electrical shock, do not mate unit connector until installation is complete and A.C. power is supplied to the unit.
2. **CAUTION** – This fixture provides more than one power supply output source. To reduce the risk of electrical shock, disconnect both normal and emergency sources by turning off the A.C. branch circuit and by disconnecting the unit connector before servicing.
3. The **IIS 50 I** requires an unswitched A.C. power source of either 120 or 277 volts. Properly cap the unused A.C. lead.
4. **DO NOT USE OUTDOORS.** The **IIS 50 I** is for use with grounded, UL Listed, damp location rated, indoor fixtures. Not for use in heated air outlets or hazardous locations.
5. Do not mount near gas or electric heaters.
6. Do not use this equipment for other than its intended use.
7. The **IIS 50 I** should be mounted securely and in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
8. The use of accessory equipment not recommended by IOTA Engineering, LLC may cause an unsafe condition, will void the warranty, and result in non-compliance with UL specifications.
9. The AC voltage rating of this equipment is specified on the product label. Do not connect the **IIS 50 I** equipment to any other voltage.
10. Suitable for use in damp locations.
11. For use in 0° C minimum, 50° C maximum ambient temperatures.
12. Install in accordance with the National Electrical Code and local regulations.
13. Installation and servicing should be performed by qualified personnel.
14. Electricians and end-users need to ensure product system compatibility before final installation.



THIS UNIT CONTAINS A
RECHARGEABLE NICKEL-CADMIUM BATTERY.
PLEASE RECYCLE OR DISPOSE OF PROPERLY.

INSTALLATION INSTRUCTIONS

CAUTION: Before installing, make certain the A.C. power is off and the IIS 50 I unit connector is disconnected.

1. MOUNTING THE IIS 50 I

Mount the **IIS 50 I** on or adjacent to the fixture in a position that does not interfere with the existing A.C. driver, ballast or any other hardware. Extend the flex conduit to the junction box or wireway channel and punch a $\frac{7}{8}$ " hole. Feed the wires and flex connector down through the hole in the fixture and secure in place with the flex connector nut. An optional T-bar mounting kit is available to mount the **IIS 50 I** above the ceiling tile adjacent to the fixture. Refer to Illustration 1. To order the optional T-bar mounting kit (part number TBMK-160) contact Customer Service.

When remote mounting, consult Customer Service for the maximum allowable distance between the inverter and fixture.

CAUTION: Properly secure the **IIS 50 I** in the ceiling grid to insure compliance with local, state, and federal guidelines regarding ceiling mounted equipment.

2. WIRING

A. CONNECTING THE INVERTER AC INPUT

This is the AC input that charges the inverter battery, therefore it requires an **unswitched** AC supply. **For 120V** supply, connect the AC line wire to the **BLACK** lead. **For 277V** supply, connect the AC line wire to the **ORANGE** lead. Connect the **WHITE** to the AC Neutral. Refer to the Wiring Diagram on Page 4. **CAUTION: Cap the unused BLACK or ORANGE input wire. Failure to do so may result in equipment failure and void the warranty.**

B. CONNECTING THE NORMAL AC SWITCHED / UNSWITCHED SUPPLY

Connect the **BLK/ORG** lead to the switched or unswitched AC supply. Connect the **WHT/BLU** to the AC Neutral. Refer to the Wiring Diagram on Page 4. For Emergency Only (Normally Off) operation, the **BLK/ORG** and **WHT/BLU** leads are not used and should be capped separately.

Select the appropriate output voltage to the AC driver/ballast on the AC Output Setting (**Voltage Selector**) switch (120 or 277 volts) located on the flex end of the **IIS 50 I**. Refer to Illustration 2.

C. CONNECTING THE INVERTER TO THE AC FIXTURE

Connect the output leads of the **IIS 50 I** to the AC fixture. **When making connections to the IIS 50 I, do NOT connect the input neutral WHITE or WHT/BLU to the output neutral GRAY.** Refer to the Wiring Diagram on Page 4. For additional wiring diagrams consult Customer Service.

Wire the AC driver/ballast with the lamp(s) in accordance with the manufacturer's installation instructions.

Install in accordance with the National Electrical Code and local regulations.

Illustration 1: IIS 50 I and Test Accessory Mounting (Top View)

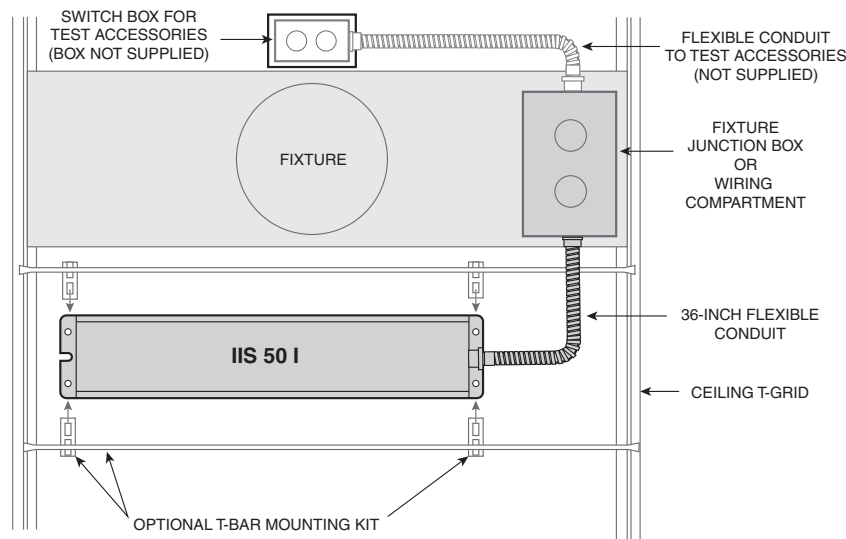
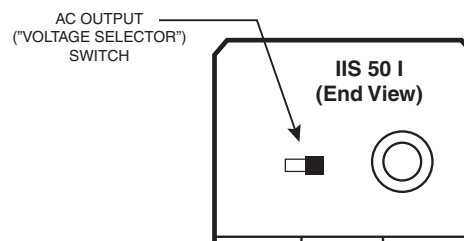


Illustration 2: AC Output Setting



CAUTION: Confirm that the AC Output Switch ("Voltage Selector") is in the proper position and that all wiring is complete before supplying AC power.

INSURE WIRING IS IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND LOCAL REGULATIONS.

3. INSTALLING THE CHARGE INDICATOR AND TEST SWITCH

The charge indicator and test switch are to be installed either within the AC fixture or in a single gang switch box (not provided) adjacent to the fixture. A faceplate for accommodating the test switch and charge indicator is included with the **IIS 50 I**. Refer to Illustration 1.

Single Switch Box Installation - Cut a single gang switch box into the ceiling adjacent to the fixture. After mounting the switch box, route test accessory leads from the junction box to the switch box via flexible conduit (not provided). Complete connections within the switch box, observing proper polarity, and secure faceplate. Refer to the Wiring Diagram on Page 4.

Integral Fixture Installation - Select a convenient location with proper clearance in the fixture where the test components are visible and accessible after installation. Drill or punch a $\frac{1}{2}$ " hole. Push the **Charge Indicator** housing into the $\frac{1}{2}$ " hole until it is firmly locked in place. Connect the leads, observing the proper polarity. The **Test Switch** should be mounted on the channel cover or on the side of the fixture, preferably adjacent to the charge indicator. Drill or punch a $\frac{5}{16}$ " mounting hole. Refer to the Wiring Diagram on Page 4.

4. COMPLETING INSTALLATION

A. When the installation is complete, confirm that the AC Output Setting (**Voltage Selector**) switch is in the proper position, then supply AC power.

Once AC Power has been applied, join the IIS 50 I unit connector.

The **Charge Indicator** will illuminate indicating the presence of AC power and that the battery is being charged.

B. Attach the appropriate labels adjacent to the **Test Switch** and **Charge Indicator**. Affix the provided '*CAUTION - This fixture provides more than one power supply output source*' label in a location readily visible to anyone servicing the fixture.

C. Allow the **IIS 50 I** to charge for approximately 1 hour then conduct a short discharge test to confirm proper operation. To conduct a long-term discharge test, allow the **IIS 50 I** to charge for 24 hours. Refer to the "Operation" section for confirming proper operating performance.

OPERATION

Normal Mode – A.C. power is present. The A.C. driver/ballast operates the lamp(s) as intended. The **IIS 50 I** is in the standby charging mode. The **Charge Indicator** will be lit providing a visual indication that the battery is being charged.

Emergency Mode – The A.C. power fails. The **IIS 50 I** senses the A.C. power failure and automatically switches to the *Emergency Mode*. The fixture is powered by the **IIS 50 I** for a minimum of 90 minutes. When the A.C. power is restored, the **IIS 50 I** switches the system back to the *Normal Mode* and resumes battery charging. See page 1 of the *Instruction Manual*.

TESTING & MAINTENANCE

Initial Testing – Allow the unit to charge approximately 1 hour, then conduct a short discharge test. Allow a 24 hour charge before conducting a one hour test.

The **IIS 50 I** is a maintenance free unit, however, periodic inspection and testing is required. NFPA 101, Life Safety Code, outlines the following schedule:

Monthly – Insure that the **Charge Indicator** light is illuminated. Conduct a 30 second discharge test by depressing the **Test Switch**. Lamp(s) should operate at full output.

Annually – Insure that the **Charge Indicator** light is illuminated. Conduct a full 1½ hour discharge test. The unit should operate as intended for the duration of the test.

"Written records of testing shall be kept by the owner for inspection by the authority having jurisdiction."

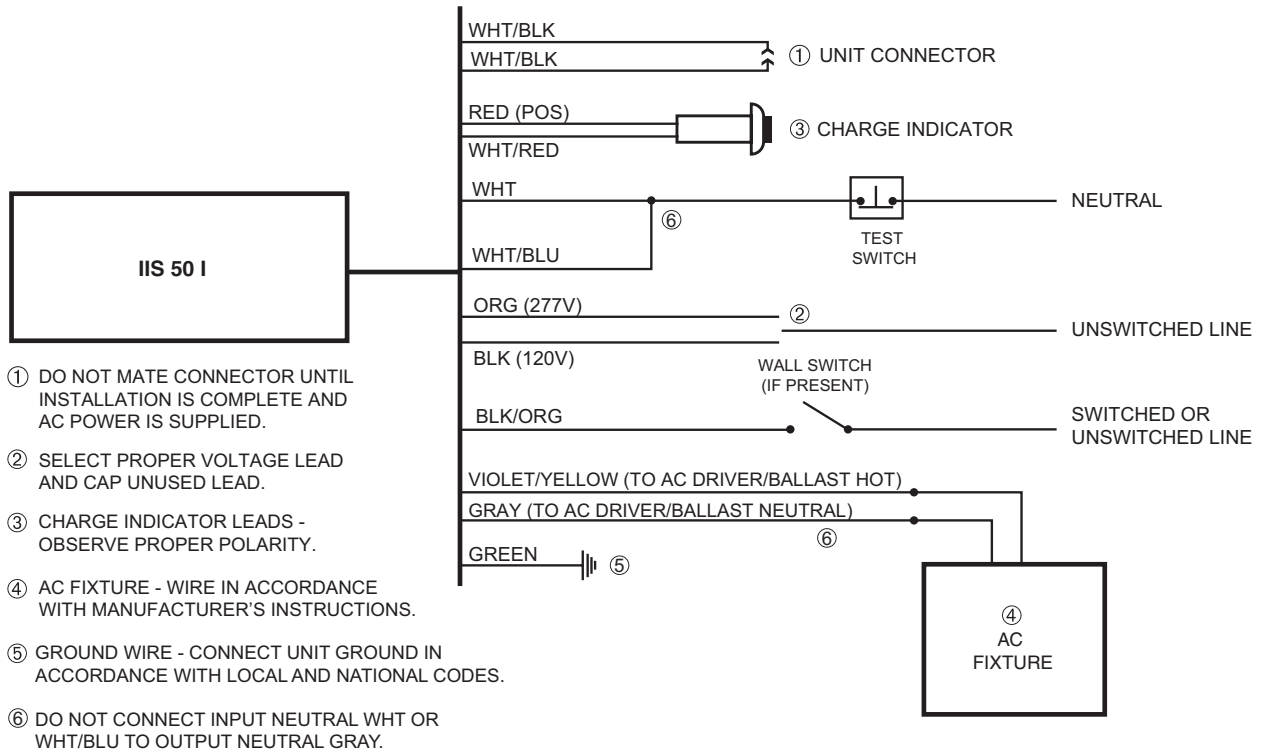
Replacing the Battery – The integral, high temperature Ni-Cad battery is replaceable. To replace the battery, disconnect the unit connector and remove both switched and unswitched A.C. power to the fixture. Open the lid to expose the battery. Unplug the battery connector and replace with part number **IIS 50 I BAT**. Recycle or dispose of the used nickel-cadmium battery properly. Close the battery lid, resupply switched and unswitched A.C. power to the fixture and reconnect the unit connector.

SERVICING SHOULD BE PERFORMED BY QUALIFIED PERSONNEL.

Consult Customer Service or visit www.iotaengineering.com for current warranty information.

WIRING DIAGRAM

For additional wiring diagrams, contact Customer Service



① DO NOT MATE CONNECTOR UNTIL INSTALLATION IS COMPLETE AND AC POWER IS SUPPLIED.

② SELECT PROPER VOLTAGE LEAD AND CAP UNUSED LEAD.

③ CHARGE INDICATOR LEADS - OBSERVE PROPER POLARITY.

④ AC FIXTURE - WIRE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

⑤ GROUND WIRE - CONNECT UNIT GROUND IN ACCORDANCE WITH LOCAL AND NATIONAL CODES.

⑥ DO NOT CONNECT INPUT NEUTRAL WHT OR WHT/BLU TO OUTPUT NEUTRAL GRAY.