



P.O. BOX 11846 TUCSON, AZ 85734  
(520) 294-3292 • FAX (520) 741-2837  
www.iotaengineering.com

# I-4PT-A

EMERGENCY LIGHTING EQUIPMENT  
FOR 13W - 42W 4-PIN  
LED REPLACEMENT LAMPS

## 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.
3. **CAUTION** – This is a sealed unit. The integral, high temperature Ni-Cad battery is not replaceable. Replace the entire unit when necessary and dispose of the nickel-cadmium battery properly.
4. **DO NOT USE OUTDOORS.** The **I-4PT-A** is for use with grounded, UL Listed, damp location rated, indoor fixtures. Not for use in heated air outlets or hazardous locations.
5. The **I-4PT-A** requires an unswitched A.C. power source of 120 to 277 volts.
6. When the **I-4PT-A** is installed on the same branch circuit, refer to Illustration 2, Figures A and B for input wiring. When installed on a separate branch circuit, refer to Illustration 2, Figures C and D for input wiring. Per NEC, the **I-4PT-A** and A.C. ballast must be on the same panel board.
7. Do not mount near gas or electric heaters.
8. The **I-4PT-A** should be mounted in locations and at heights where it will not readily be subjected to tampering by unauthorized personnel.
9. The **I-4PT-A** will operate *one* 13W through 42W 4-pin LED CFL replacement lamp for 90 minutes. Contact Customer Service for additional lamp usage.
10. The **I-4PT-A** is compatible with most electronic A.C. ballasts (including multiple lamps) as follows:  
Electronic ballasts – one lamp emergency operation.
11. The **I-4PT-A** meets CA T20 Battery Charger Efficiency Standards and is certified in the CA Title 20 Modernized Appliance Efficiency Database System (MAEDBS) as a Small Battery Charger.
12. Suitable for use in damp locations.
13. For use in 0° C minimum, 55° C maximum ambient temperatures.
14. The use of accessory equipment or lamps not recommended by the manufacturer may cause an unsafe condition, will void warranty, and will result in non-compliance with UL specifications.
15. Do not use this equipment for other than intended use.
16. Install in accordance with the National Electrical Code and local regulations.
17. Installation and servicing should be performed by qualified personnel.
18. Lighting fixture manufacturers, electricians and end users need to ensure product system compatibility before final installation.

### SAVE THESE INSTRUCTIONS



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 I-4PT-A unit connector is disconnected.

## 1. LAMPS OPERATED

The **I-4PT-A** will operate one 13W - 42W LED CFL replacement lamp in emergency mode. Contact IOTA Customer Service for a list of lamps that are qualified for operation in emergency mode.

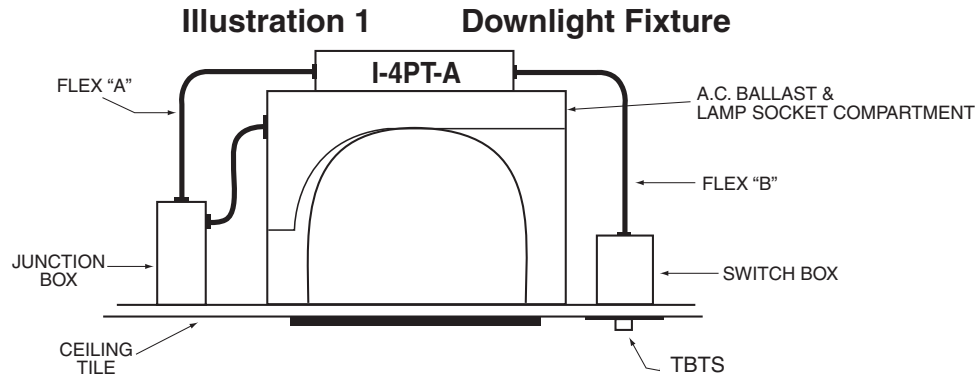
## 2. MOUNTING THE I-4PT-A

When used with ceiling mounted downlight fixtures, the **I-4PT-A** should be mounted on the fixture above the ceiling. The flex conduit marked "A" should be wired into the ballast/lamp compartment or to an electrical junction box on the fixture which allows access to the ballast/lamp connections. Refer to *Illustration 1* for typical mounting.

When battery packs are remote mounted, consult Customer Service for the maximum allowable distance between the battery pack and the lamp.

## 3. MOUNTING THE THREADED BODY TEST SWITCH (TBTS)

Cut a single gang switch box into the ceiling tile adjacent to the fixture within reach of the **I-4PT-A** flex marked "B". After mounting the switch box, connect flex "B" to the box and route all leads inside the box. Refer to *Illustration 1* for typical mounting.



## 4. WIRING

A. When the **I-4PT-A** is installed on the same branch circuit, refer to *Illustration 2*, Figures A and B for input wiring. When installed on separate branch circuits, refer to *Illustration 2*, Figures C and D for input wiring. Per NEC, the **I-4PT-A** and A.C. ballast must be on the same panel board.

B. The **I-4PT-A** requires an **unswitched** A.C. power source of 120 to 277 volts; therefore, when used with switched fixtures, the **I-4PT-A** input must be wired ahead of the switch. Refer to *Illustration 2* for switched and unswitched fixture wiring diagrams.

C. Refer to the wiring diagrams on the back page for the proper wiring. For wiring diagrams of ballasts not shown, consult our Customer Service.

## 5. LABELS

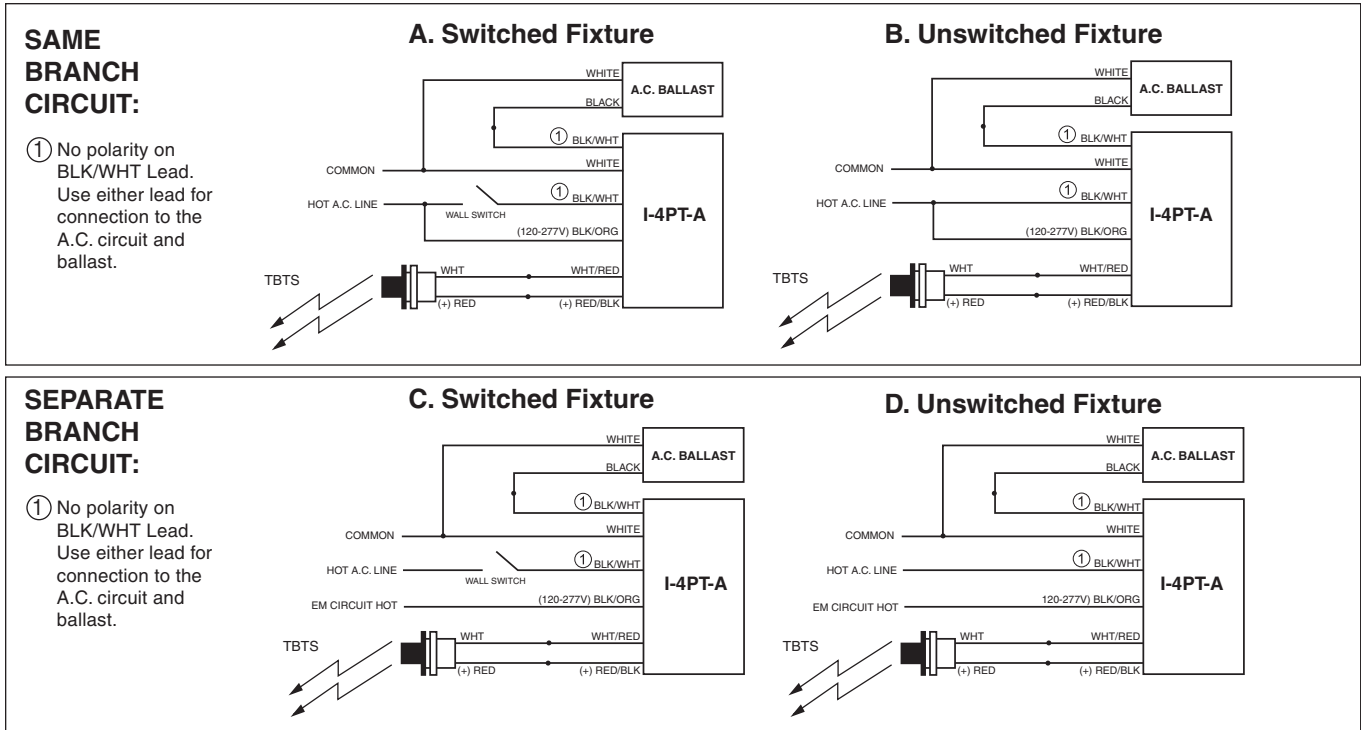
Attach the appropriate labels adjacent to the **TBTS**. Annotate Re-lamping label for lamp manufacturer and part number. The Caution and the Re-lamping labels must be on the fixture in a readily visible location to anyone attempting to service the fixture.

## 6. COMPLETING INSTALLATION

When the installation is complete, switch the A.C. power on and join the **I-4PT-A** unit connector.

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

## Illustration 2



## OPERATION

**General** – This unit is primarily designed to be used with compact fluorescent lamp downlight fixtures. It will wire in conjunction with the existing A.C. ballast(s) and LED CFL Replacement lamp(s) to provide the emergency function. It can also be wired for emergency only operation. The **TBTS** light is offered for installation in a standard single gang switch box adjacent to the fixture.

**Normal Mode** – A.C. power is present. The A.C. ballast operates the LED CFL Replacement lamp(s) as intended. The **I-4PT-A** is in the standby charging mode. The **TBTS** will be lit providing a visual indication that the battery is being charged.

**Emergency Mode** – The A.C. power fails. The **I-4PT-A** senses the A.C. power failure and automatically switches to the *Emergency Mode*. One lamp is illuminated, at reduced output, for a minimum of 90 minutes. When the A.C. power is restored, the **I-4PT-A** switches the system back to the *Normal Mode* and resumes battery charging. See page 1 of the Instruction Manual.

## TESTING & MAINTENANCE

Pressing the **TBTS** turns off the light on the **TBTS** and forces the unit into emergency mode, interrupting power to the designated A.C. ballast. The emergency lamp is now being lit by the **I-4PT-A** unit. After releasing the **TBTS**, the fixture returns to normal operation after a momentary delay.

**Initial Testing** – Allow the unit to charge approximately 1 hour, then conduct a short discharge test by depressing the **TBTS**. The **TBTS** will go out and the LED CFL Replacement lamp will be illuminated. Allow a 24 hour charge before conducting a one hour test.

The **I-4PT-A** 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 **TBTS** light is illuminated. Conduct a 30 second discharge test by depressing the **TBTS**. One lamp should operate at reduced output.

**Annually** – Insure that the **TBTS** 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.”

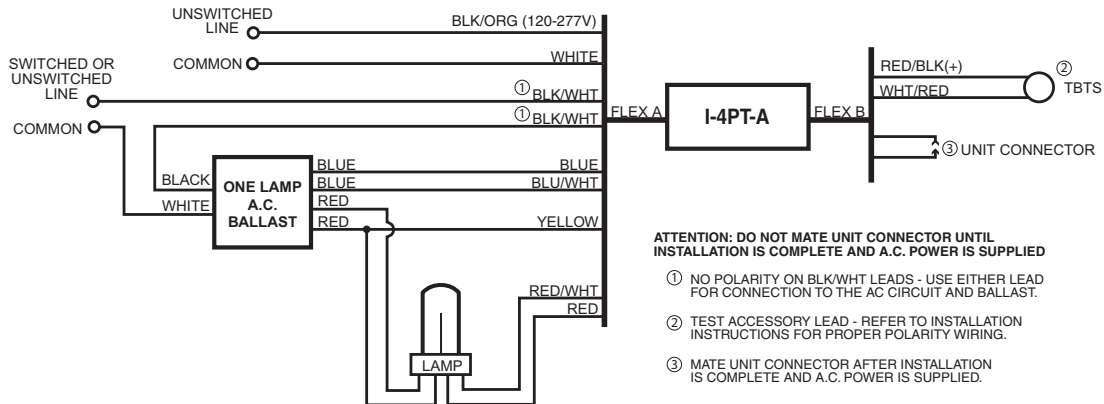
**SERVICING SHOULD BE PERFORMED BY QUALIFIED PERSONNEL.**  
Consult Customer Service or visit [www.iotaengineering.com](http://www.iotaengineering.com) for current warranty information.

# TYPICAL WIRING DIAGRAMS

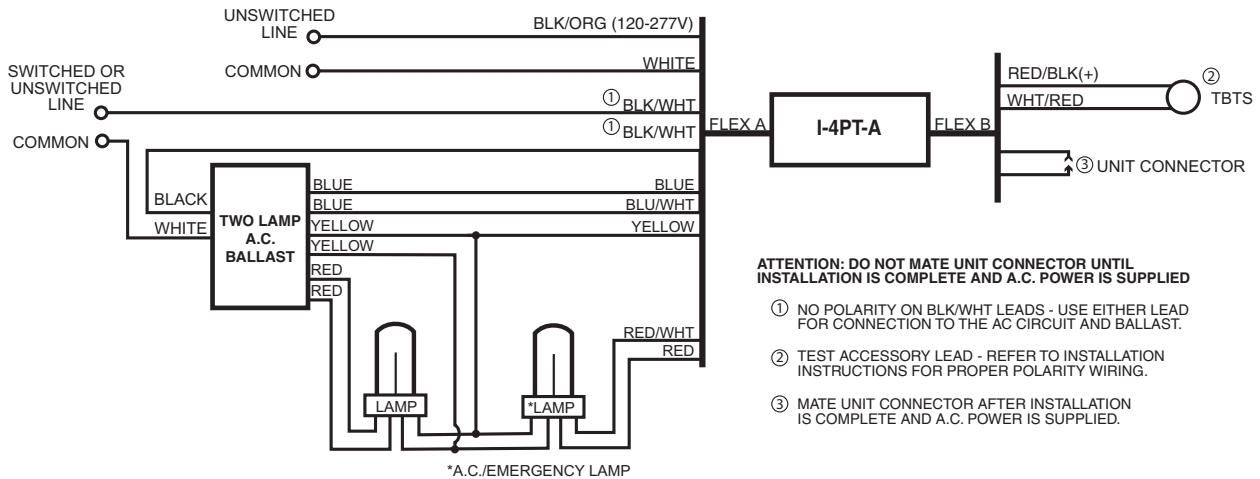
Use in conjunction with Rapid Start ballasts and 4 pin LED CFL Replacement lamps only

Wiring and Troubleshooting Tips are available on-line at <http://www.iotaengineering.com/wiringtips.pdf>

## 1. ONE LAMP RAPID START BALLAST



## 2. TWO LAMP RAPID START BALLAST WITH ONE LAMP EMERGENCY OPERATION



## I-4PT Lamp Compatibility Addendum (Rev.112818)

Refer to the table below for UL Listed lamps that have been tested and verified compatible with the I-4PT-A

**I-4PT-A Table: Operable Lamps**

Lamp Manufacturer	Model	Lumens*	Max. Height**
GE	LED9G24Q-H/835	217	13 ft
GE	LED9G24Q-V/840	249	13 ft
GE	LED12G24Q-H/835	278	15 ft
GE	LED12G24Q-V/830	250	13 ft
GE	LED19GX24Q-H/827	409	15 ft
GE	LED19GX24Q-V/830	444	17 ft
Green Creative	5.5PLH/840/DIR/R	248	11 ft
Green Creative	6PLV/840/DIR	241	11 ft
Green Creative	8.5PLH/840/DIR	274	11 ft
Green Creative	9.5PLH/840/DIR	304	12 ft
Green Creative	9.5PLV/840/DIR	268	12 ft
Green Creative	10PLV/840/DIR	274	13 ft
Green Creative	10.5PLH/930/DIR	255	11 ft
Green Creative	11PLV/930/DIR	201	10 ft
Keystone	KT-LED94P-H-840-S	323	12 ft
Keystone	KT-LED94P-V-840-S	300	12 ft
Maxlite	12PLG24QHLED40	395	14 ft
Maxlite	11PLG24QVLED40	330	14 ft
Philips	8.5PL-C/T LED/26H-4000 IF 4P	251	11 ft
Philips	10.5PL-C/T LED/26V-4000 IF 4P	300	11 ft
Philips	12PLC/T LED/32H/830/IF/4P/DIM	235	11 ft
Satco	9WPLH/LED/840/DR/4P	432	14 ft
Satco	9WPLV/LED/840/DR/4P	374	11 ft
Satco	13W/V/LED/CFL/840/4P	355	12 ft
Satco	13W/VL/LED/CFL/840/4P	344	13 ft
Sylvania	LED9PBGX24QH841	323	12 ft
Sylvania	LED9PBGX24QV841	276	10 ft

\*Lumen performance based on bare lamp operation

\*\*Heights based on 1 FC delivery