

Operation Instruction

— Dual Mode (Direct Replacement & Single ended By Pass & Double ended By Pass)

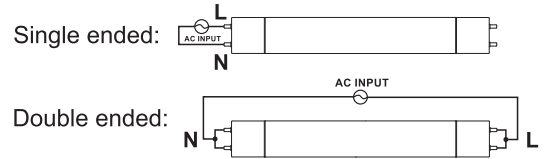
Product Name: LED T8 Tube Dual Mode Series

Input Voltage: Determined by fluorescent ballast (Direct Replacement mode)

120-277VAC 50/60Hz (By Pass Mode)

1. Product Features:

- UL certified
- Full glass housing: No Aging, Yellowing, Bending.
- Two operation models:
 - Direct Replacement Mode (Mode I)
 - Plug-n-Play replacement
 - Compatible with instant start electronic ballast
 - By Pass Mode (Mode II)
 - Direct connect with the mains: 120–277VAC 50/60Hz (universal voltage input)



2. Products Applications:

Widely used in residential buildings, offices, shopping malls, supermarkets, hospitals, assembly lines, warehouses, etc. for energy saving illumination.

3. Installation Instructions:

Please completely comply with these instructions and notes, to ensure that the product is operated in a safe condition.

4. Safety Information:

- 1). Check the lamp before installation, if there is any damage caused during transportation, do not install.
- 2). Maintenance should be carried out by technical personnel only.
- 3). Do not stare at the light source with bare eyes for a long time, or beam to others' eyes.
- 4). Do not place any objects on the lamp.
- 5). Keep the lamp away from flame or high temperature objects.
- 6). Only replace with same type of LED tube! Risk of electrical shock!
- 7). If the glass lamp tube is broken, the lamp must be disposed of immediately!

5. Maintenance Notes:

- 1). Disconnect lamp from power supply before any maintenance.
- 2). Clean luminaire with dry cloth.
- 3). Do not clean the lamp with corrosive chemicals.

⚠ Safety Precautions:

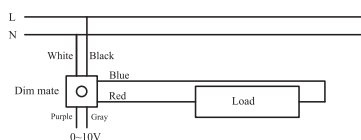
For your and others' safety, please read the precaution carefully before installation.

For Direct Replacement Mode (Mode I)

- 1). WARNING: Risk of shock. Disconnect power before installation.
- 2). WARNING: Risk of fire, use only in place of fluorescent lamps specified on label. Risk of electric shock. Suitable for damp locations.
- 3). LED T8 lamp for use only with products described and installed in accordance with product specifications. LED T8 lamp to be operated with fluorescent electronic ballast.
- 4). Not for emergency lighting.
- 5). This product may cause interference to radio equipment and should not be installed near maritime safety communications equipment or other critical navigation or communication equipment operating between 0.45-30 MHz.

For By Pass Mode (Mode II)

- 1). Product should be installed by qualified electrician.
- 2). Switch off the power supply before commencing work, make sure correct connection before power on.
- 3). Not for emergency lighting.
- 4). This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- 5). Only use the control provided with or specified by these instructions to control this amp. This lamp will not operate properly when connected to a standard (incandescent) dimmer or dimming control. Only operate with specific dimmer MEX_G1_NA_45W under 120-277V, 60Hz.



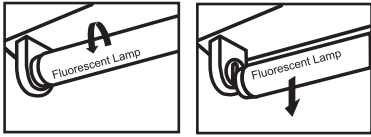
The units covered by this report were intended to retrofit surface mount, Type IC or non-IC recessed mount Listed fluorescent luminaires that use maximum 4 straight tubular lamps, the minimum lamp compartment dimensions are tabulated below:

Model Number	MINIMUM LAMP COMPARTMENT DIMENSIONS [Length × Width × Height] [cm]	Lamp Quantity	Lamp-to-lamp Spacing [cm]
LED-10T8-FCAB24-G4	61 x 57 x 7.5	4	7
LED-11T8-FCAB36-G4	92 x 57 x 7.5	4	14
LED-12T8-FCAB48-G4 LED-15T8-FCAB48-G4	121 x 53 x 10	4	9

DIRECT REPLACEMENT Mode (Mode I)

INSTALLATION INSTRUCTIONS

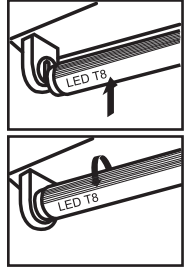
- 1) Make Sure Power is OFF
- 2) Remove lens or diffuser (if applicable)
- 3) Remove existing fluorescent lamps from the luminaire.



- 4) Bring LED lamp to luminaire and insert lamp pins into luminaire lamp holders.
- 5) Rotate LED lamp until lamp locks in place. Ensure that the LED lamp front points away from the back of the luminaire.

Note: install LED T8 replacement lamp one for each fluorescent lamp removed.

- 6) Place lens or diffuser back in place (if applicable)
- 7) Power ON

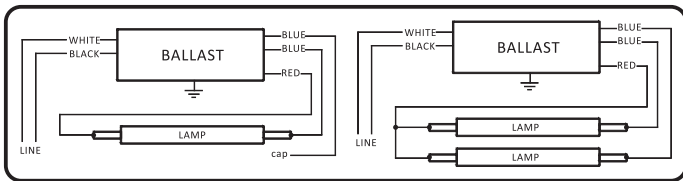


Suggestion:

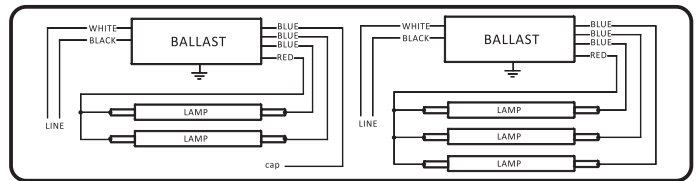
Please use jumpered or shunted socket, because in Direct Replacement Mode, this lamp can only be compatible with instant start electronic ballast, and the bi-pin on lamp base are not electrical connected internally.

Instant Start Ballast Wiring Diagram (Correct)

Two Lamps Ballast Correct Wiring

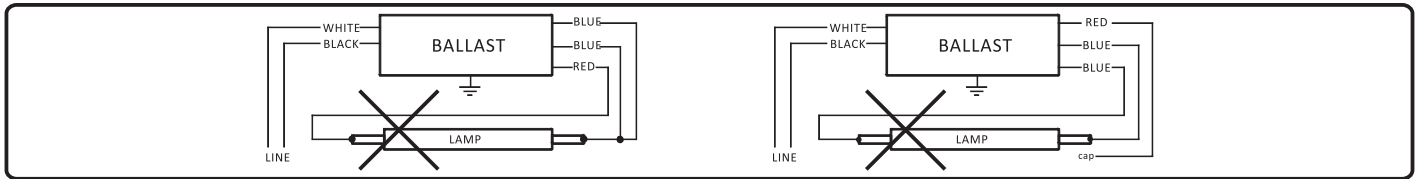


Three Lamps Ballast Correct Wiring

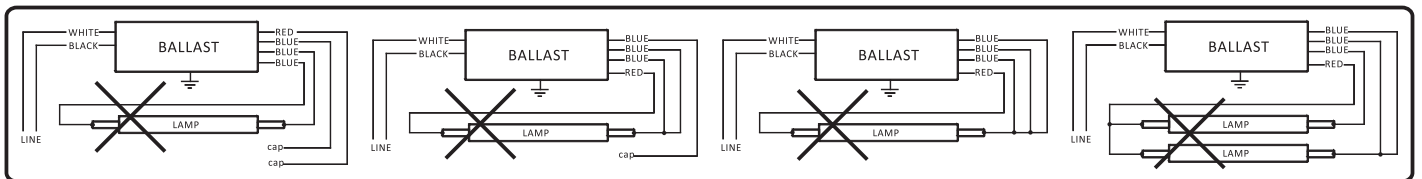


Instant Start Ballast Wiring Diagram (Incorrect)

Two Lamps Ballast Incorrect Wiring



Three Lamps Ballast Incorrect Wiring



DO NOT INSTALL THIS LAMP IN A PRE - HEAT LUMINAIRE.

N'INSTALLEZ PAS CETTE LAMPE DANS UN APPAREIL D'ÉCLAIRAGE DE PRÉCHAUFFAGE.

THIS LAMP ONLY OPERATES ON ELECTRONIC BALLASTS. IF LAMP DOES NOT LIGHT WHEN THE LUMINAIRE IS ENERGIZED, REMOVE LAMP FROM LUMINAIRE AND CONTACT LAMP MANUFACTURER OR QUALIFIED ELECTRICIAN.

CETTE LAMPE OPERE SEULEMENT AVEC LE BALLAST ELECTRONIQUE. SI LA LAMPE NE S'ALLUME PAS QUAND L'APPAREIL D'ECLAIRAGE ACTIVE, ENLEVEZ LA LAMPE DE L'APPAREIL D'ECLAIRAGE ET CONTACTEZ LE FABRICANT DE LAMPE OU UN ELECTRICIEN QUALIFIE.

CAUTION RISK OF FIRE - IF THE LAMP OR LUMINAIRE EXHIBITS UNDESIRABLE OPERATION (BUZZING, FLICKERING, ETC.), IMMEDIATELY TURN OFF POWER, REMOVE LAMP FROM LUMINAIRE AND CONTACT MANUFACTURER.

ATTENTION RISQUE DE FEU - SI LA LAMPE OU LE LUMINAIRE MONTRE DES SIGNES D'OPERATION INDESIRABLE (BRUIT, VIBRATION, CLIGNOTEMENT, ETC.), ALORS COUPER IMMÉDIATEMENT LE COURANT ET ENLÈVER LA LAMPE DE L'APPAREIL D'ÉCLAIRAGE ENTRER EN CONTACT AVEC LE FABRICANT.

Type A LAMP – intended for direct substitution of a fluorescent lamp and operation from the integral ballast without any modifications to the fluorescent luminaire.

CAUTION - RISK OF ELECTRIC SHOCK. Do not use if outer lamp envelope is damaged or broken.

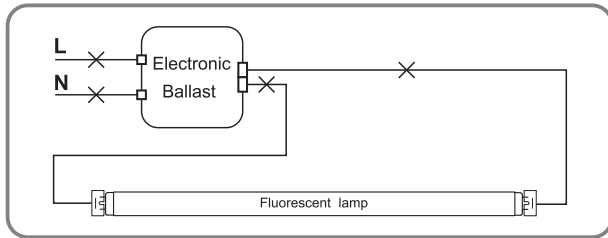
BY PASS Mode (Mode II)

⚠ The below ballast wiring represents typical configuration. The actual ballast wiring varies according to ballast model. The socket should be non-shunted.

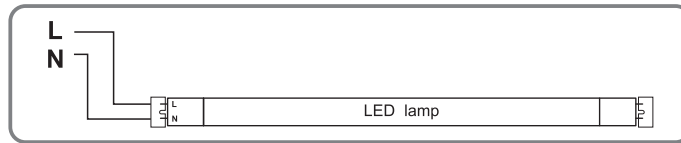
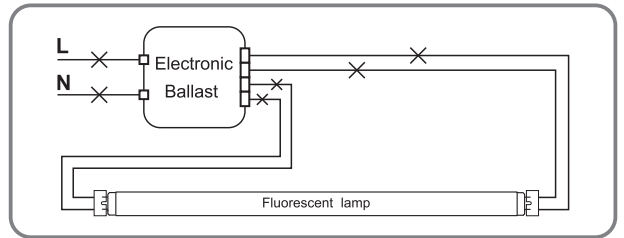
Single ended Wiring Instruction

Retrofit luminaire with 1 lamp

Instant Start

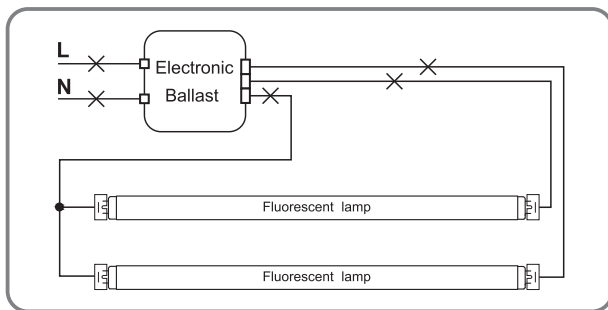


Program Start or Rapid Start

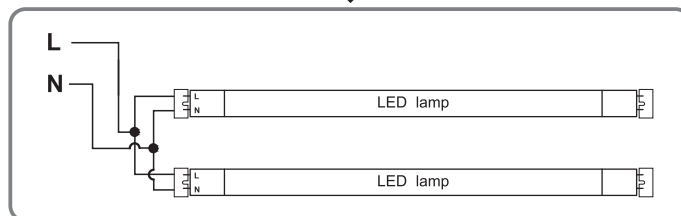
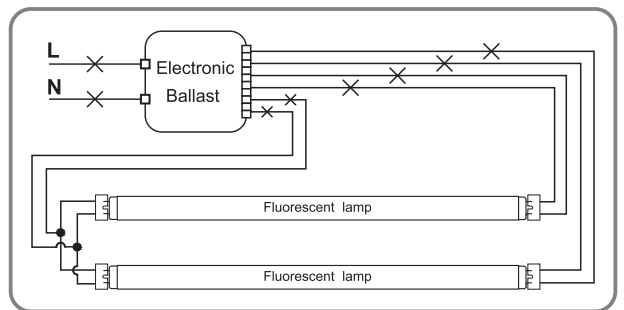


Retrofit luminaire with 2 lamps

Instant start

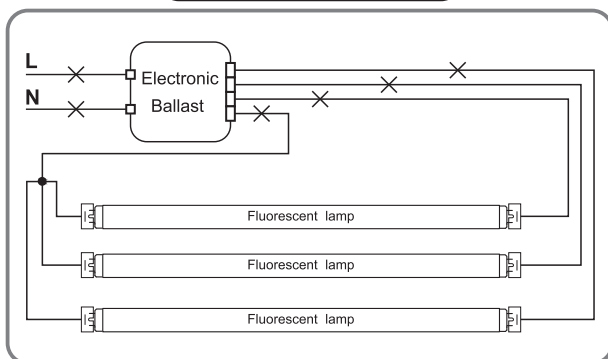


Program Start or Rapid Start

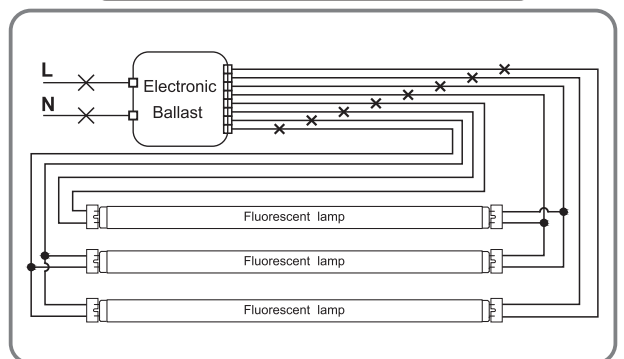


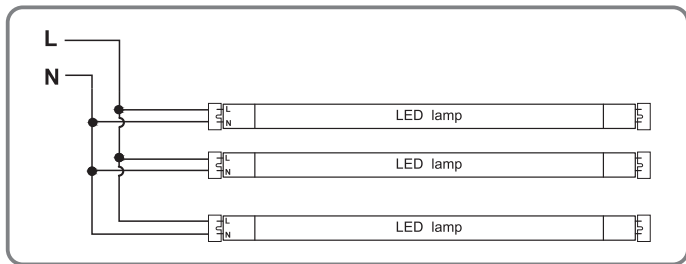
Retrofit luminaire with 3 lamps

Instant start



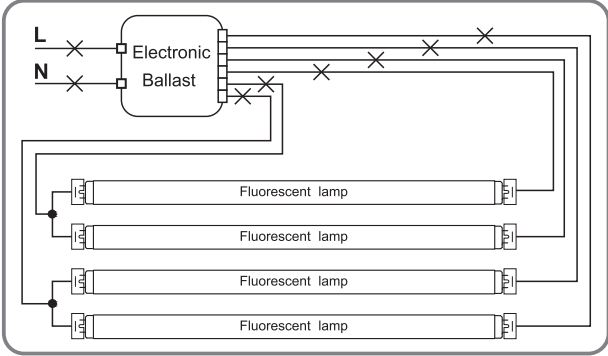
Program Start or Rapid Start



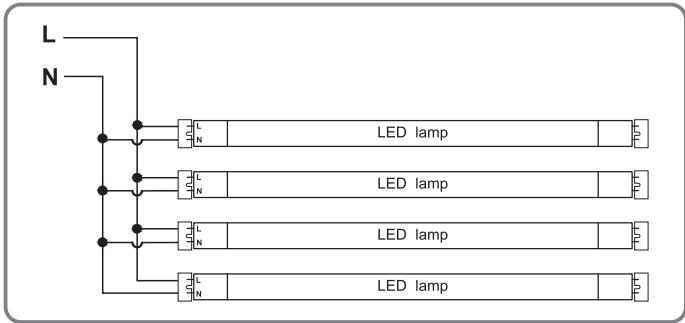
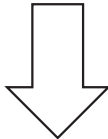
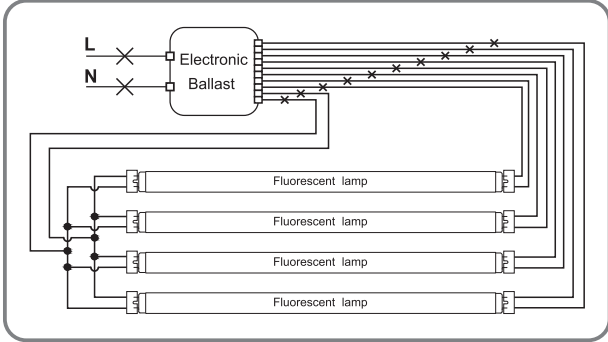


Retrofit luminaire with 4 lamps

Instant start



Program Start or Rapid Start

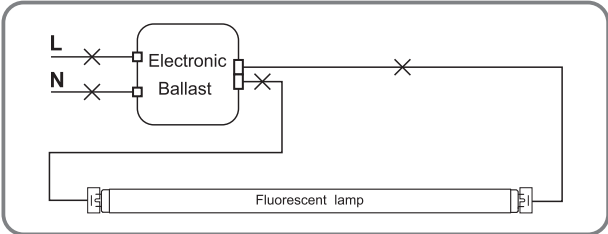


⚠ The below ballast wiring represents typical configuration. The actual ballast wiring varies according to ballast model. It is not needed to change socket (if in good condition) to operate double ended lamps, regardless the type of sockets. Please make sure one side of fixture is connected to Live (L) and the other side to Neutral (N).

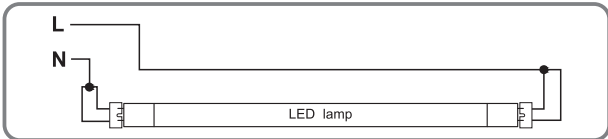
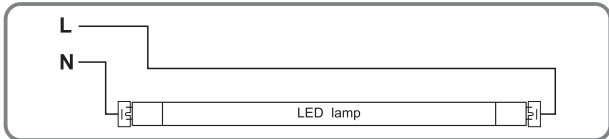
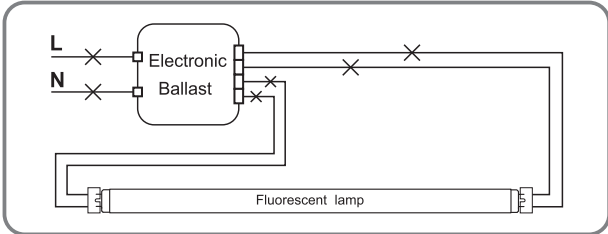
Double ended Wiring Instruction

Retrofit luminaire with 1 lamp

Instant Start

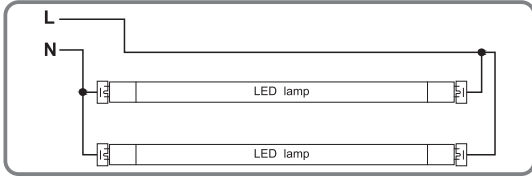
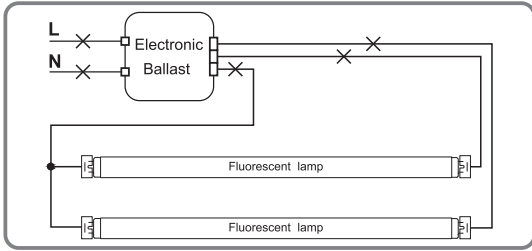


Program Start or Rapid Start

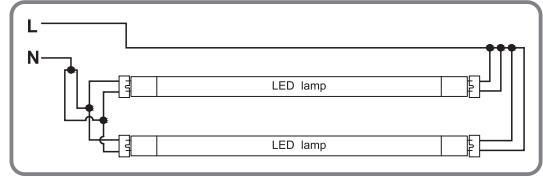
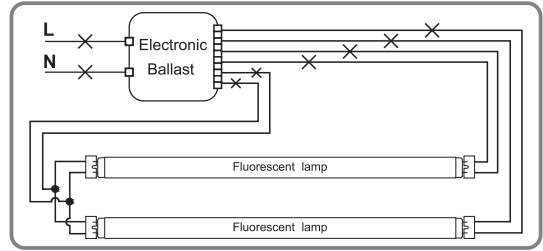


Retrofit luminaire with 2 lamps

Instant Start

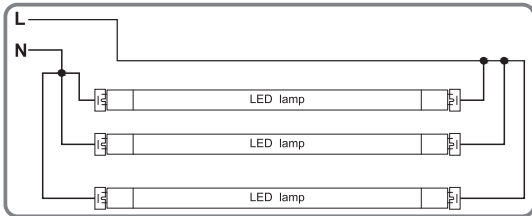
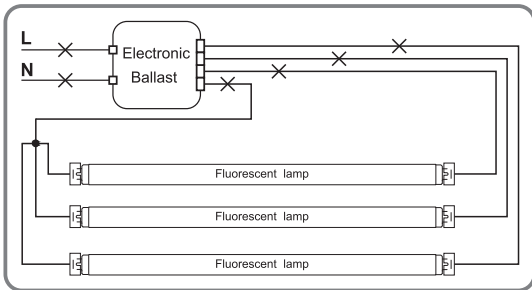


Program Start or Rapid Start

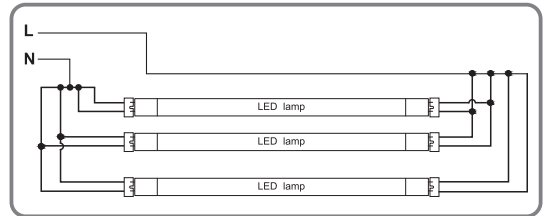
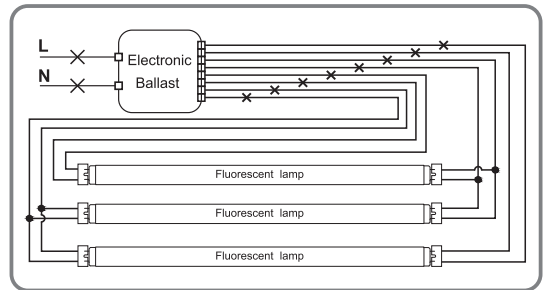


Retrofit luminaire with 3 lamps

Instant Start

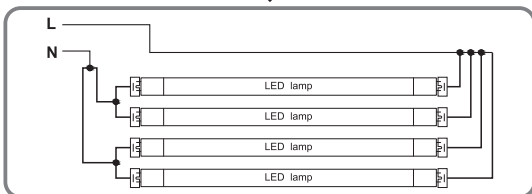
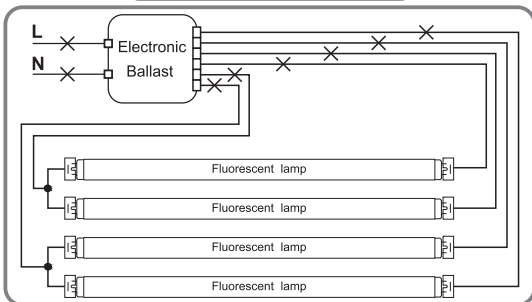


Program Start or Rapid Start

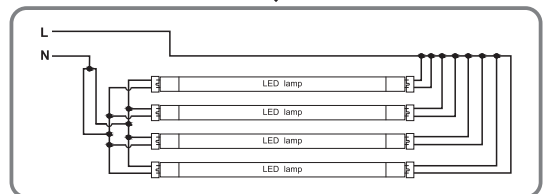
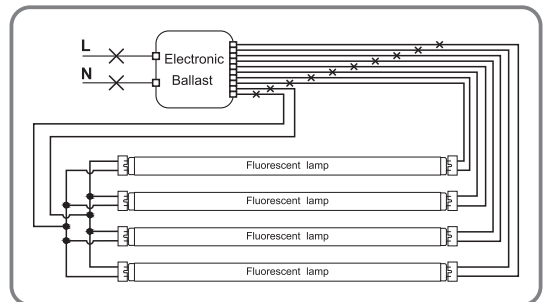


Retrofit luminaire with 4 lamps

Instant Start



Program Start or Rapid Start



WARNING - Risk of fire or electric shock. LED Retrofit Kit installation requires knowledge of luminaire electrical systems. If not qualified, do not attempt installation. Contact a qualified electrician.

AVERTISSEMENT - Risque d'incendie ou de choc électrique. Installation du kit de Retrofit LED exige une connaissance des systèmes électriques luminaire. Si vous n'êtes pas qualifié, ne tentez pas de l'installation. Contactez un électricien qualifié.

WARNING - Risk of fire or electric shock. Install this kit only in the luminaires that have the construction features and dimensions shown in the photographs and/or drawings and where the input rating of the retrofit kit does not exceed the input rating of the luminaire.

AVERTISSEMENT - Risque d'incendie ou de choc électrique. Installez ce kit dans les luminaires qui ont les caractéristiques de construction et les dimensions indiquées dans les photographies et / ou dessins et où la cote d'entrée du kit de modification ne dépasse pas la capacité d'entrée du luminaire.

WARNING -To prevent wiring damage or abrasion, do not expose wiring to edges of sheet metal or other sharp objects.

AVERTISSEMENT - Pour éviter d'endommager le câblage ou à l'abrasion, ne pas exposer le câblage aux bords de tôle ou d'autres objets pointus.

WARNING: To avoid potential fire or shock hazard, do not use this retrofit kit in luminaires employing shunted bi-pin lampholders. Note: Shunted lamp holders are found only in fluorescent luminaires with Instant-Start ballasts. Instant-start ballasts can be identified by the words "Instant Start" or "I.S." marked on the ballast. This designation may be in the form of a statement pertaining to the ballast itself, or may be combined with the marking for the lamps with which the ballast is intended to be used, for example F40T12/IS. For more information, contact the LED luminaire retrofit kit manufacturer.

AVERTISSEMENT: Pour éviter tout incendie potentiel ou tout risque de choc, ne pas utiliser ce kit de rénovation dans les luminaires utilisant des douilles shuntées à deux broches. Remarque: les supports de lampe shunté ne se trouvent que sur les luminaires fluorescents avec ballasts et à allumage instantané. Les ballastes à allumage instantané peuvent être identifiés par les mots "Démarrage instantané" ou "I.S" sur la ballaste. Cette désignation peut être présentée sous la forme d'une déclaration relatives au ballast lui-même, ou peut être combinée avec le marquage pour les lampes dont le ballast est destiné à être utilisé, par exemple le modèle F40T12 / EST. Pour plus d'informations, contactez le fabricant du kit de rénovation de luminaire LED.

Do not make or alter any open holes in an enclosure of wiring or electrical components during kit installation.

Installers should not disconnect existing wires from lampholder terminals to make new connections at lampholder terminals. Instead installers should cut existing lampholder leads away from the lampholder and make new electrical connections to lampholder lead wires by employing applicable connectors.

Installers should examine all parts that are not intended to be replaced by the retrofit kit for damage and replace any damaged parts prior to installation of the retrofit kit.

THERE ARE TUBE, OPERATION INSTRUCTION AND FILED THE DOUBLE-ENDED OR SINGLE-ENDED APPLICATION LABEL IN THIS RETROFIT KIT.

THE RETROFIT KIT IS ACCEPTED AS A COMPONENT OF A LUMINAIRE WHERE THE SUITABILITY OF THE COMBINATION SHALL BE DETERMINED BY AUTHORITIES HAVING JURISDICTION. PRODUCT MUST BE INSTALLED BY A QUALIFIED ELECTRICIAN IN ACCORDANCE WITH THE APPLICABLE AND APPROPRIATE ELECTRICAL CODES. THE INSTALLATION GUIDE DOES NOT SUPERSEDE LOCAL OR NATIONAL REGULATIONS FOR ELECTRICAL INSTALLATIONS.

Type B LAMP – intended for operation in luminaires with traditional fluorescent-type lampholders wired directly to the branch circuit. This includes both factory-wired luminaires as well as those converted for this purpose under a retrofit program.

Tel: (847) 380-3540 www.led-llc.com

Light Efficient Design 188 S. Northwest Highway Cary, IL 60013. USA